

**IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK**

NEW YORK IMMIGRATION
COALITION, *et. al*,

Plaintiff,

v.

UNITED STATES DEPARTMENT OF
COMMERCE, *et. al*,

Defendant.

Civil Action No. 18-CV-2921-JMF

Hon. Jesse M. Furman

DECLARATION OF JENNIFER VAN HOOK

1. I, Jennifer L. Van Hook, pursuant to the provisions of 28 U.S.C. § 1746, declare under penalty of perjury that the following is true and correct.

2. I submit this declaration in lieu of direct expert testimony in the trial in the above captioned case.

I. Background and Qualifications

3. I was asked by Plaintiffs to bring my scientific expertise and experience to bear on the question of whether the addition of the citizenship question to the 2020 Decennial Census is likely to result in greater item and unit nonresponse, particularly among populations for whom the citizenship question may be particularly sensitive.

4. I am Roy C. Buck Professor of Sociology and Demography at the Pennsylvania State University. I served as director of the Population Research Institute at Penn State from 2011 through 2016. Currently, I am the director of graduate studies in sociology at Penn State

and co-editor of *Demography*, the flagship journal for population science. I am also a non-resident fellow at the Migration Policy Institute.

5. I am trained as a sociologist and demographer. I obtained a PhD in Sociology in 1996 from the University of Texas at Austin. I have an M.S. in Sociology from the University of Wisconsin at Madison and B.A. from Carleton College. After obtaining my PhD, I worked at the Urban Institute on projects related to education and program participation among immigrants. In 1999 I joined the faculty at Bowling Green State University, and then moved to Penn State University in 2007.

6. I have over 20 years of research experience analyzing large demographic data sources on topics related to immigration. My publications have appeared in major sociology and demography journals, including *Demography*, *Journal of Health and Social Behavior*, *Social Science and Medicine*, *Sociology of Education*, *Social Forces*, and *American Sociological Review*, and I have received external funding for my work from the National Institutes of Health, the National Science Foundation, the Foundation for Child Development, the Russell Sage Foundation, and the U.S. Census Bureau.

7. My work uses demographic methods to estimate the size, characteristics, and dynamics of the foreign-born population. My colleagues and I have evaluated and improved estimates of the unauthorized foreign-born population. This line of research resulted in several high-profile publications, including new estimates of the size and heterogeneity of the unauthorized Mexican-born population (Bean et al. 2001); the development of a new method and estimates of foreign-born emigration (Van Hook et al. 2006; Van Hook & Zhang 2011) and coverage error (Van Hook et al. 2014); new assessments of the quality of self-reported data on citizenship and legal status (Van Hook and Bachmeier 2013; Bachmeier, Van Hook and Bean

2014); and monte carlo simulations that tested a variety of legal status imputation approaches (Van Hook et al. 2015). The work on legal status led to important innovations that have enabled researchers at the Migration Policy Institute and elsewhere to produce estimates of the characteristics and geographic distribution of the unauthorized population in greater detail than possible with earlier methods. A copy of my Curriculum Vitae includes a complete list of my publications. *See* PX-536.

8. I served as a member of the Census Advisory Committee of Professional Organizations, PAA, from 2008 to 2011. I also served as an expert for the 2010 Census Demographic Analysis Program (Net International Migration Team) and am currently serving on the 2020 Census Demographic Analysis Program (Net International Migration Team). In such capacities, I advise the Census Bureau on various issues, including which items should be included in the decennial Census and the likely impact of adding such questions on the overall quality of the data collected.

9. I submitted an expert report in this case on September 7, 2018. *See* PX-317.

10. I submitted a supplemental expert report on October 23, 2018, based on data that was not available when I drafted my initial report, including American Community Survey data made available to the public by the Census Bureau just recently on October 18, 2018. *See* PX-318.

11. Based on my experience, training, knowledge, and education, I believe I am well qualified to offer expert opinions on the question of whether the addition of the citizenship question to the 2020 Decennial Census is likely to result in greater item and unit nonresponse, particularly among populations for whom the citizenship question may be particularly sensitive. I hold my opinions in this case to a strong degree of professional certainty.

II. Summary of Opinions

12. My analyses of the patterns and trends in nonresponse point to three key findings:

- 1) Hispanics and immigrants (especially noncitizens or those living in immigrant households) tend to have relatively high unit nonresponse rates and item nonresponse rates for questions on place of birth and citizenship.
- 2) Both unit and item nonresponse have increased significantly over time among immigrants. Unit nonresponse rates rose in the Trump era among noncitizens while remaining steady or declining among citizens. Item nonresponse also rose among those living in immigrant households, particularly for Hispanics.
- 3) Hispanic immigrants experienced particularly large increases in nonresponse since the start of 2018.

13. Between the last quarter of 2016 and the first quarter of 2018, the adjusted unit nonresponse rate increased among Hispanic noncitizens by 43 percent. Adjusted item nonresponse rates increased by a similar amount — 45 percent — among Hispanics in immigrant households during the same time period. These are large changes for such a short period of time, especially when considering that my analysis probably underestimates the true levels of unit nonresponse in the population. As I discuss in greater detail below, the outcomes I examined — unit nonresponse for follow-up interviews and item nonresponse — are measured on a sample of people who have already agreed to participate in at least one Current Population Survey (“CPS”) interview. My results do not capture the patterns and trends in nonresponse for the least compliant survey respondents, those who never agreed to participate in the CPS.

14. While I cannot state with certainty which factors or events contributed to these trends, my analyses controlled for and enabled me to discount several of the most mundane explanations, including the possibilities that they arose from changing demographic composition of the population, household migration patterns, sudden up-ticks in household migration or

deportations, or that they reflect increasing trends in item nonresponse in general and not just for citizenship/nativity questions.

15. Instead, the results of my analyses are consistent with the concept that immigrants, especially Hispanic noncitizens and those living in foreign-born households, have become less compliant respondents to Census Bureau surveys since early 2017, and more sensitive in particular to question concerning citizenship. Moreover, the timing of the sharp increase in item and unit nonresponse in 2018 is noteworthy as it overlaps with the time period when the 2020 citizenship question was being discussed in national media and when the issue of citizenship appeared to be particularly salient among Spanish-speaking internet users.

16. In sum, the overall patterns of unit and item nonresponse are consistent with the understanding that survey response changed for the worse among Hispanic noncitizens, and the timing of the change suggests that it is linked to changes in the political and/or policy climate, including the proposal to add the citizenship question to the 2020 Decennial Census. The unit nonresponse data is consistent with the understanding that adding a citizenship question to the Census will reduce nonresponse rates among racial minorities (in particular Hispanics) as compared to non-Hispanic whites, and noncitizens as compared to citizens. Moreover, the item non-response rate estimates raise concerns that adding a citizenship question will not yield accurate citizenship responses for a substantial percentage of certain groups, including Hispanics, Asians, and people living in a household with at least one immigrant.

III. Overview of Analysis

17. For my initial expert report, I analyzed data from the Current Population Survey (“CPS”), which is a monthly survey of approximately 60,000 U.S. households administered by

the U.S. Census Bureau, which contains a question concerning citizenship status, to assess what the nonresponse rates to that survey suggest about the effect of adding a citizenship question to the 2020 Decennial Census. As I explain below, the CPS provides a valuable data source to consider when evaluating the possible effects of adding a citizenship question to the 2020 Decennial Census.

18. A major focus of my analysis was to assess whether particular groups are at greater risk of being underrepresented in the 2020 Decennial Census than other groups if the citizenship question were added to the questionnaire. My hypothesis was that if a citizenship question is added to the 2020 Decennial Census, immigrants and those who live with immigrants may be less likely to respond to requests to participate in the Census or answer questions about their citizenship for a variety of reasons, including low English proficiency, complex and dynamic living arrangements, and the adverse immigration rhetoric and policies of the Trump administration. This may be particularly the case for noncitizens, many of whom possess marginal or uncertain legal status. Hispanics and Asians may also be sensitive to immigration-related questions because a large share are immigrants.

19. As shown in Figure 1¹ below, half of Hispanic adults are immigrants and one-third are noncitizens. Among Asian adults, three-quarters are immigrants and nearly one-third are noncitizens.

¹ The figures I have presented in this declaration are a subset of the ones developed and presented in either my original expert report (which are denominated Figure 1, Figure 2, etc.) or my supplemental report (which are denominated with a reference to "S", Figure S1, Figure S2, etc.) All of the data tables, including those underlying all of the charts and graphs for both reports are presented in the Appendix to this Declaration.

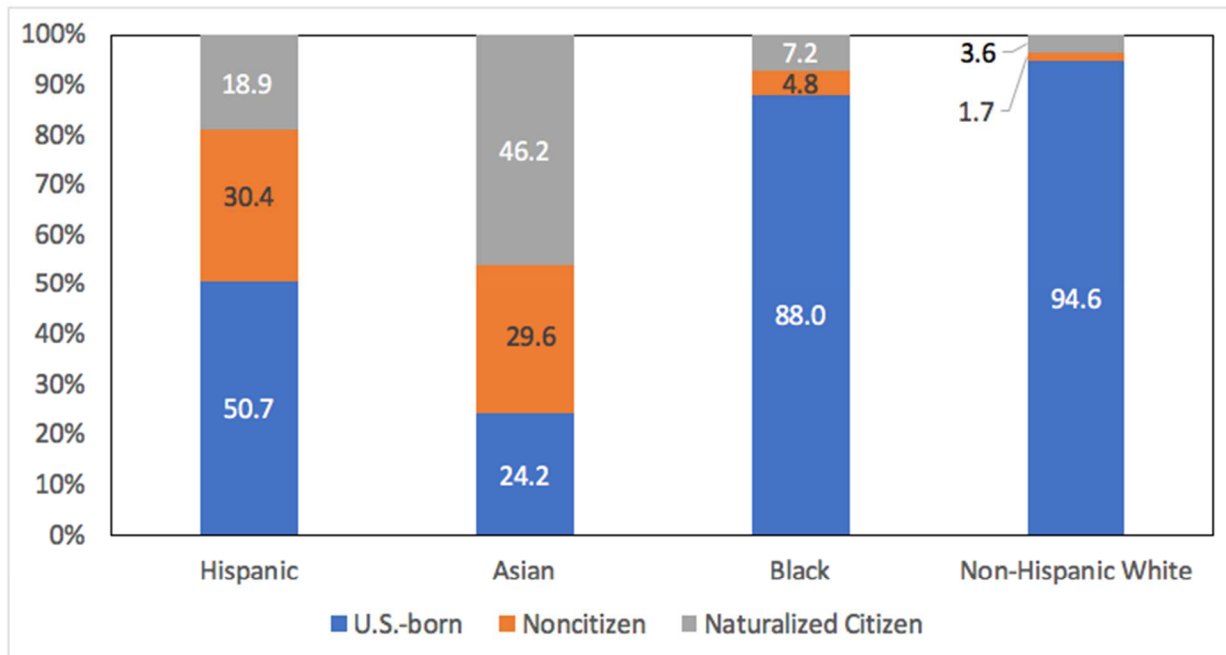


Figure 1. Percentage of Adults Who Are U.S. born, Naturalized, and Non-citizen, by Race/ethnicity

Sample: Monthly CPS 2014-2018 (Flood et al, 2018), adults age 18+, excluding non-Hispanics identifying as "other" race.

20. My analysis explored changes in nonresponse that have occurred since the beginning of the Trump administration in January 2017. This is important for two reasons. First, the harsh immigration policies proposed or enacted by the Trump administration may be associated with increases in nonresponse rates among vulnerable groups. The 2020 Decennial Census will be conducted under the current administration, so *current* levels of nonresponse on government surveys featuring a citizenship question (i.e., post-2017), including the CPS, are very relevant for anticipating the effect of adding a citizenship question to the 2020 Decennial Census.

21. A second reason for examining recent trends was to assess whether there is any evidence that people changed their behaviors in terms of responding to a government survey featuring a citizenship question since the announcement of the Administration's proposal to add

such a question to the 2020 Decennial Census, which was a prominent issue in the media between January and March 2018. Indeed, citizenship may have become an increasingly salient issue for Hispanics, especially since the start of the Trump presidential campaign and administration. This is illustrated in Figure 2 below, which shows the number of Google searches conducted in the United States for “ciudadanía” (Spanish for citizenship) since January 1, 2016. The chart’s values are scaled, whereby 100 is set to the peak value. Interest in citizenship increased with the start of the Trump administration (with a spike during the three weeks immediately following Trump’s executive order barring refugees and immigrants from 7 Muslim countries), and increased again in 2018 when the citizenship question in the 2020 Decennial Census was proposed in early January and approved in March by Secretary Ross and remained at this higher level.

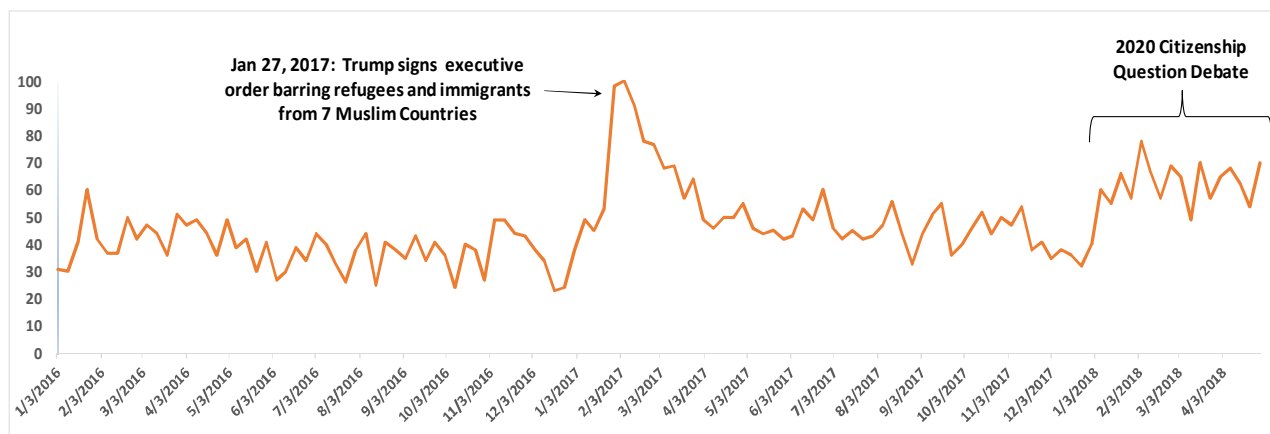


Figure 2 Google Searches for "Ciudadanía" (Citizenship), United States, 2015-2018 (100=peak level)

Source: Google Trends (<https://trends.google.com/trends/?geo=US>)

22. If nonresponse to the CPS—which, as noted, includes a question on citizenship—increased when the 2020 citizenship question was being proposed and debated, then this would be consistent with the understanding that the administration’s proposal to add the citizenship question to the 2020 Decennial Census is already having an effect on respondents’ willingness to

respond to a Census Bureau survey containing a question on citizenship. It would also suggest that adding a citizenship question could dampen response rates in the Decennial Census.

23. It is important, however, to keep in mind that other factors besides the policies and practices of the Trump Administration could explain trends in nonresponse to the CPS. Factors like age, sex, and education affect whether a person agrees to be interviewed or answers a survey question. For example, if the average age or educational level of a group declined for one reason or another, either of these changes might cause the group's nonresponse rate to increase. If this occurred, it would mean that we should not attribute the increase in nonresponse to the 2020 citizenship question debate or any other changes in the political climate for that matter. Therefore, when assessing whether nonresponse may have increased in response to the 2020 citizenship question debate, I took care to adjust the trends for compositional changes in a variety of demographic factors.

24. My first set of analyses concerned patterns and trends in unit nonresponse to the CPS. Unit nonresponse, means not participating in the survey at all. I examined the following questions:

- 1) How does unit nonresponse to the CPS vary by race/ethnicity and citizenship status?
- 2) How much has unit nonresponse to the CPS changed between 2014 and 2018?
- 3) After adjusting for possible changes in demographic characteristics, did unit nonresponse to the CPS increase around the time of the beginning of the Trump Administration (since the first quarter of 2017) and/or during the months when the proposal to add the citizenship question to the 2020 Decennial Census was discussed in the media (the first quarter of 2018)?

25. My second set of analyses concerned trends and patterns in item nonresponse, which is the extent to which people who otherwise participate in responding to the CPS fail to

answer the specific questions about their citizenship or nativity. I examined the following questions:

- 1) How does item nonresponse to the citizenship question on the CPS vary by race/ethnicity and citizenship status?
- 2) How much has item nonresponse to the citizenship question on the CPS changed between 2013 and 2018?
- 3) After adjusting for possible changes in demographic characteristics, did item nonresponse to the citizenship question on the CPS increase around the time of the beginning of the Trump Administration (since the first quarter of 2017) and/or during the months when the proposal to add the citizenship question to the 2020 Decennial Census was discussed in the media (the first quarter of 2018)?

IV. CPS Data Source

26. I analyzed the public-use Current Population Survey (“CPS”) monthly data from January 2013 through March 2018 (a total of 64 months), which I downloaded from the Integrated Public Use Microdata Series CPS website. Nonresponse data from the CPS is useful for assessing the possible effect of adding a citizenship question to the 2020 Decennial Census, for several reasons. The CPS is conducted by the U.S. Census Bureau itself. It asks questions that attempt to capture the very same information about place of birth and citizenship question that is being proposed for the 2020 Decennial Census. The CPS asks “In what country were you born?” and “are you a citizen of the United States?” Among those who respond affirmatively to the citizenship question, the CPS then asks “were you born a citizen of the United States?” and “Did you become a citizen of the United States through naturalization?” The proposed citizenship question in the Decennial Census differs slightly in that it would ask a single question to gather the same information as the CPS: “Is this person a citizen of the United States?” with five response options based on both place of birth and naturalization status as shown below.

Is this person a citizen of the United States?

☐ Yes, born in the United States

☐ Yes, born in Puerto Rico, Guam, the U.S. Virgin Islands, or Northern Marianas

☐ Yes, born abroad of U.S. citizen parent or parents

☐ Yes, U.S. citizen by naturalization – *Print year of naturalization* ➤

☐ No, not a U.S. citizen

27. The CPS has a very large sample size (see Table A1). For example, for the months from January 2013 through March 2018, the CPS interviewed 759 thousand adults. The large sample size makes it possible to examine item and unit nonresponse with great precision by race/ethnicity and nativity and over time.

28. A unique strength of the CPS is that it has the most up-to-date publicly-released data from a Census Bureau conducted survey that includes a citizenship question. CPS data for 2017 and parts of 2018 have already been released. The CPS can be used to assess month-to-month changes in item nonresponse to citizenship questions, including in the months before and after the start of the Trump administration.

29. Another unique strength of the CPS is that it is longitudinal in that it interviews the occupants of the same housing units on multiple occasions over time, and therefore can be used to measure group differences in unit nonresponse during follow-up interviews. Demographic information about CPS respondents can be obtained during the first interview, so group differences in unit nonresponse can be estimated by examining the rate at which members of different demographic groups are successfully re-interviewed.

V. Analysis of CPS Data

A. Unit Response

30. Patterns and trends in unit nonresponse in the CPS are highly relevant for anticipating whether the inclusion of the citizenship question would jeopardize the Decennial Census count. Unit nonresponse is damaging to the Decennial Census because it means that people, often whole households, are missed. If people failed to return the Decennial Census questionnaire, the Census Bureau would have to make additional attempts to get them to respond, and if follow-up attempts were unsuccessful, this could raise undercount rates. To measure unit nonresponse, I took advantage of the CPS's longitudinal design. I examined the likelihood of not being successfully followed-up and re-interviewed at later points in time among those who completed a successful first CPS interview.

31. To explain, in the CPS, households are interviewed for 4 consecutive months in one year, not interviewed during the subsequent 8 months, and then followed up and re-interviewed over the following 4 more months. For example, if a household is first interviewed in January 2014, then it will be followed up in February through April 2014 and January through April 2015. People can be interviewed up to 8 times. The CPS gathers demographic information, including place of birth and citizenship, at the first interview. It repeats questions about labor force activity every month, and rotates across special topics from month to month (e.g., November's questionnaire includes questions about voting behavior, and December's questionnaire asks about food security).

32. To determine whether a person did not respond, I looked for them in subsequent follow-up months. Those who were not interviewed were coded as having not responded (i.e., "unit nonresponse"). As shown in Table 1 below, the percentage unit nonresponse increases

across the number of months they were in the sample (i.e., month-in-sample), particularly between month-in-sample 4 and 5, which are 8 calendar months apart. As the table indicates, Hispanic, black, and Asian CPS respondents were all more likely to fail to respond to the subsequent CPS follow-up interviews than non-Hispanic whites.

Table 1. Percentage Unit Nonresponse For CPS Follow-up Interviews (Current or Any Prior Interview), by Month-in-Sample and Race/Ethnicity

	Month-in-sample						
	2	3	4	5	6	7	8
Hispanic	6.7	12.1	16.7	35.0	38.1	40.6	42.4
Asian	6.4	11.6	15.7	32.8	35.6	37.8	39.4
Black	8.4	14.6	20.1	38.8	42.1	44.5	46.3
NH-White	5.6	10.2	14.0	29.3	31.9	34.0	35.4

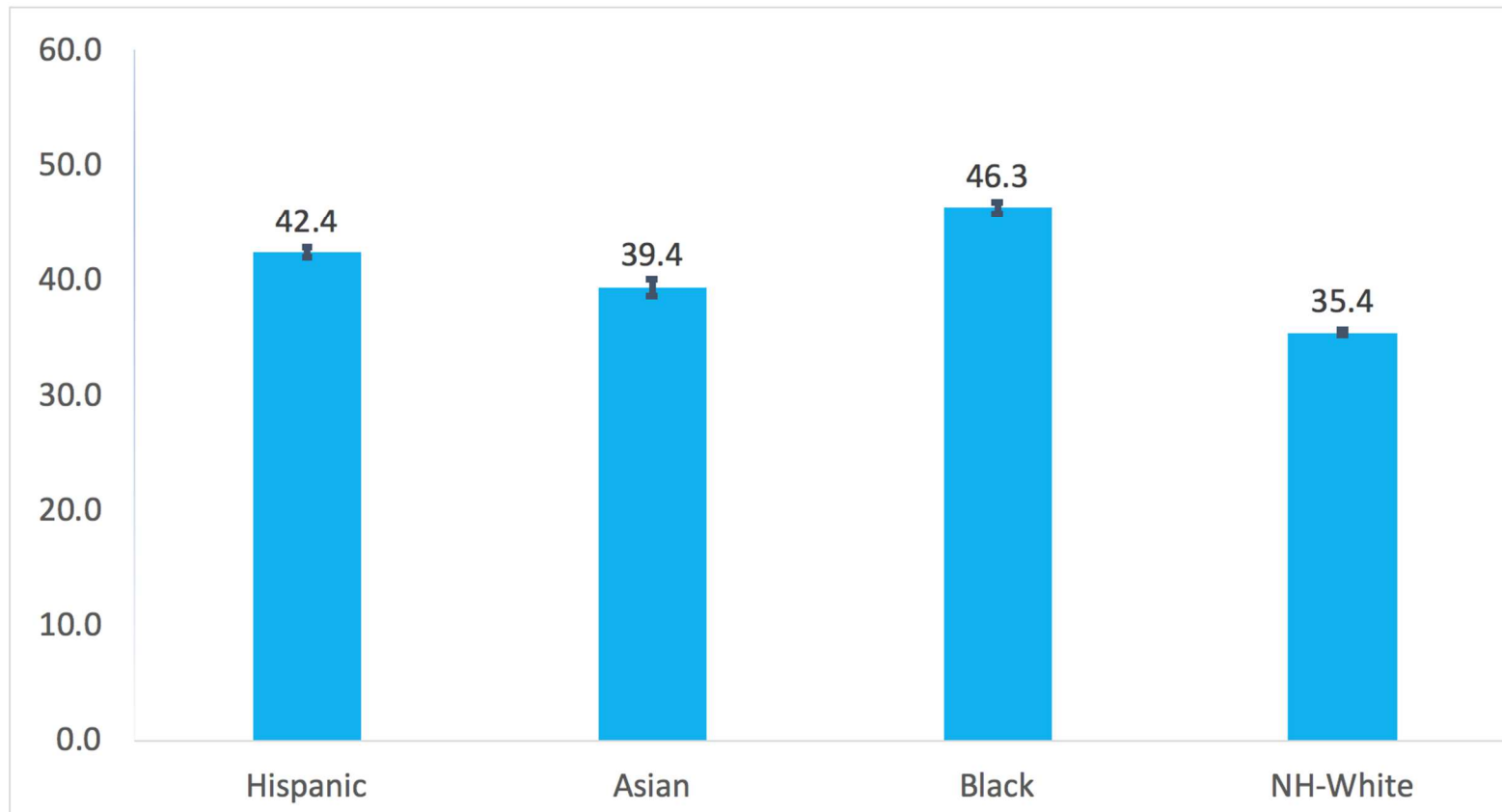
Sample: Monthly CPS 2014-2018 (Flood et al, 2018), adults age 18+ who were first interviewed between Sept 2014 and Jan 2017, and followed-up as late as March 2018, excluding non-Hispanics identifying as "other" race.

33. I note that this approach for measuring unit nonresponse has limitations. In particular, it is likely conservative because it is limited to those who have agreed to be interviewed at least once in the CPS, and thus, is selective of people who have already proven to be willing survey respondents. Unit nonresponse for these follow-up interviews is likely lower compared with unit nonresponse for the entire population. This analysis is therefore likely conservative. For this reason, I restricted the analysis to those who were first interviewed prior to the start of the Trump administration (I restricted the sample to original household members who were first interviewed between September 2014 and January 2017) to ensure that response rates during the first interview were unaffected by Trump's policies and programs. Thus, even though the sample is biased toward compliant survey-takers, it does not necessarily exclude people who are sensitive to Trump's anti-immigrant policies and programs. I then compared the unit nonresponse rates during follow-up interviews among those who were followed up in the

Trump era versus those who were followed up earlier. I wanted to see whether those who were re-contacted after January 2017 (especially in the 1st quarter of 2018 when the proposal to add the citizenship question to the 2020 Decennial Census was discussed in the media) were less likely to respond than those who were re-contacted before 2017. Even though the citizenship question is not asked during follow-up interviews, the respondents would not necessarily know this when contacted for a follow-up interview. In fact, they might expect to be asked more questions about citizenship given that they were asked these questions at the first interview.

i. Racial/Ethnic and Citizenship Differences in Unit Nonresponse

34. Hispanics, blacks, and Asians have higher unit nonresponse rates from the CPS than non-Hispanic whites. By the 8th CPS interview, 42.4 percent of Hispanics and 46.3 percent of blacks had skipped or refused at least one interview as shown in Figure 3 below (and Table A3). The unit nonresponse rate was a little lower among Asians (39.4 percent), and lowest among non-Hispanic whites (35.4 percent). These racial/ethnic differences are statistically significant, as indicated by the fact that the error bars, signifying 95 percent confidence intervals, are tiny and do not overlap. Comparing Hispanics to non-Hispanic whites, the difference is 7.0 percentage points.



**Figure 3. Percentage Unit Nonresponse by 8th CPS Interview,
by Race/Ethnicity**

Sample: Monthly CPS 2014-2018 (Flood et al, 2018), adults age 18+ who were first interviewed between Sept 2014 and Jan 2017, and followed up as late as March 2018, excluding non-Hispanics identifying as "other" race.

Error bars = 95% confidence intervals

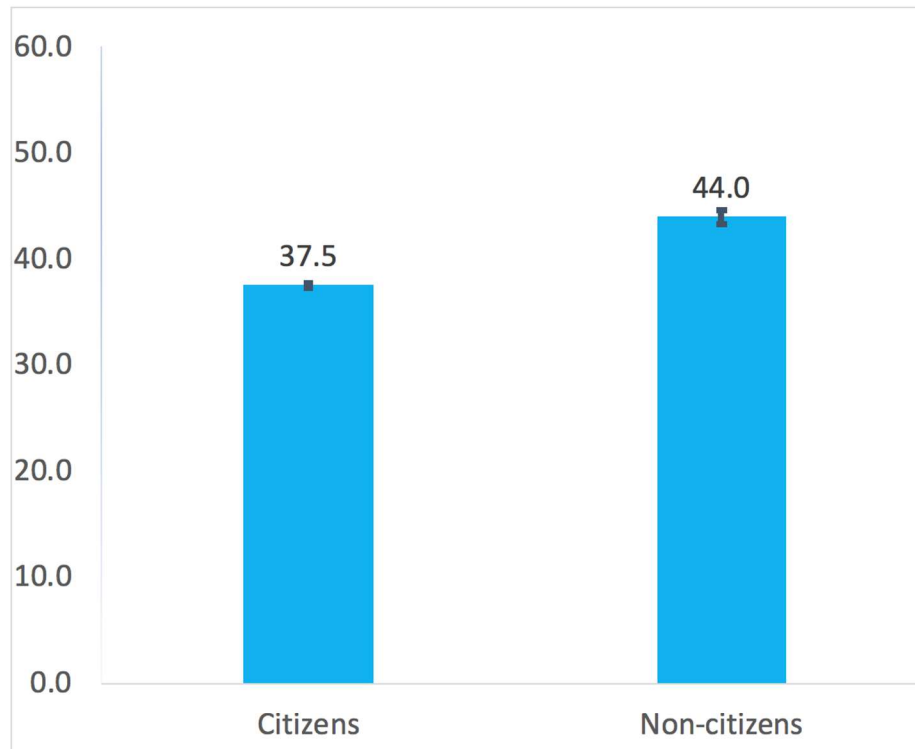


Figure 4. Percentage Unit Nonresponse by 8th CPS Interview, by Citizenship Status

Sample: Monthly CPS 2014-2018 (Flood et al, 2018), adults age 18+ who were first interviewed between Sept 2014 and Jan 2017, and followed up as late as March 2018, excluding non-Hispanics identifying as "other" race.

Error bars = 95% confidence intervals

35. Additionally, noncitizens have higher unit nonresponse rates for the CPS than citizens as shown in Figure 4 above (and Table A3 in the Appendix). By the 8th CPS interview, 44 percent of noncitizens compared to 37.5 percent of citizens had skipped or refused at least one interview. Thus, unit nonresponse for noncitizens is 17 percent higher than it is for citizens ($\frac{44-37.5}{37.5} = .17$).

ii. Change Over Time

36. I first examined trends in unit nonresponse rates across racial-ethnic groups and did not find strong temporal patterns. (See Table A4-S and Figure 5-S in the Appendix). While the unit nonresponse rates fluctuated somewhat, there is no obvious widening of racial/ethnic

differences in unit nonresponse over the time period. An exception is that unit nonresponse rates appear to have increased among Hispanics and blacks during the first quarter of 2018.

37. In contrast, monthly unit nonresponse rates between noncitizens and citizens diverged significantly over time as shown in Table A5 and Figure 6 in the Appendix. At the beginning of the time period, the third quarter of 2014, noncitizens were 21 percent more likely to drop out of the CPS than citizens. By the end of the time period, the first quarter of 2018, noncitizens were 44 percent more likely to not respond than citizens. Much of this change occurred since 2017; the monthly unit nonresponse rate for noncitizens increased by 1.5 percentage points from 7.9 to 9.4 percent, while the unit nonresponse rate remained steady at 6.5 percent among citizens. As a consequence, the gap between noncitizens and citizens doubled since the last quarter of 2016.

iii. Robustness Checks and Adjusted Trends

38. When looking at changes over time, it is important to remember that the composition of a group is always shifting due to normal demographic processes. Some people die or move away while others are born or move into the country. Additionally, people change as they get older, go to school, and change residences. If the population changed in ways that led to higher unit nonresponse rates, then the patterns seen in the data in Tables A4-S and A5 may be due to these population shifts, and not because people are responding to an adverse political climate or to the proposal to add a citizenship question to the 2020 Decennial Census.

39. To adjust the results for shifts in population composition, I estimated multivariate models that test whether citizenship is related to failing to respond to the CPS while accounting for the effects of state of residence, age, sex, education, and nonresponse on other items that are unrelated to immigration (age and sex). I then used the models to generate predicted values and

graphed the adjusted monthly unit nonresponse rate in Figures 7 and 8 below. In comparison to the unadjusted estimates, the adjusted results provide a less noisy depiction of trends in behaviors related to dropping-out of the CPS, and are better suited for judging whether noncitizens and Hispanics changed their behaviors in response to changes in political climate or the debate about the citizenship question in the 2020 Decennial Census rather than factors related to the demographic composition of noncitizens and Hispanics.

40. Results in Figure 7 below (Table A6 in the Appendix) show that, once adjusted, unit nonresponse rates tend to be higher for blacks than non-Hispanic whites, Asians, and Hispanics. Adjusted unit nonresponse rates among Hispanic whites, Asians, and Hispanics tend not to differ significantly across groups before 2017. However, these patterns changed in the first quarter of 2018, when adjusted unit nonresponse rates among Hispanics significantly increased above the levels seen among Asians and non-Hispanic whites.

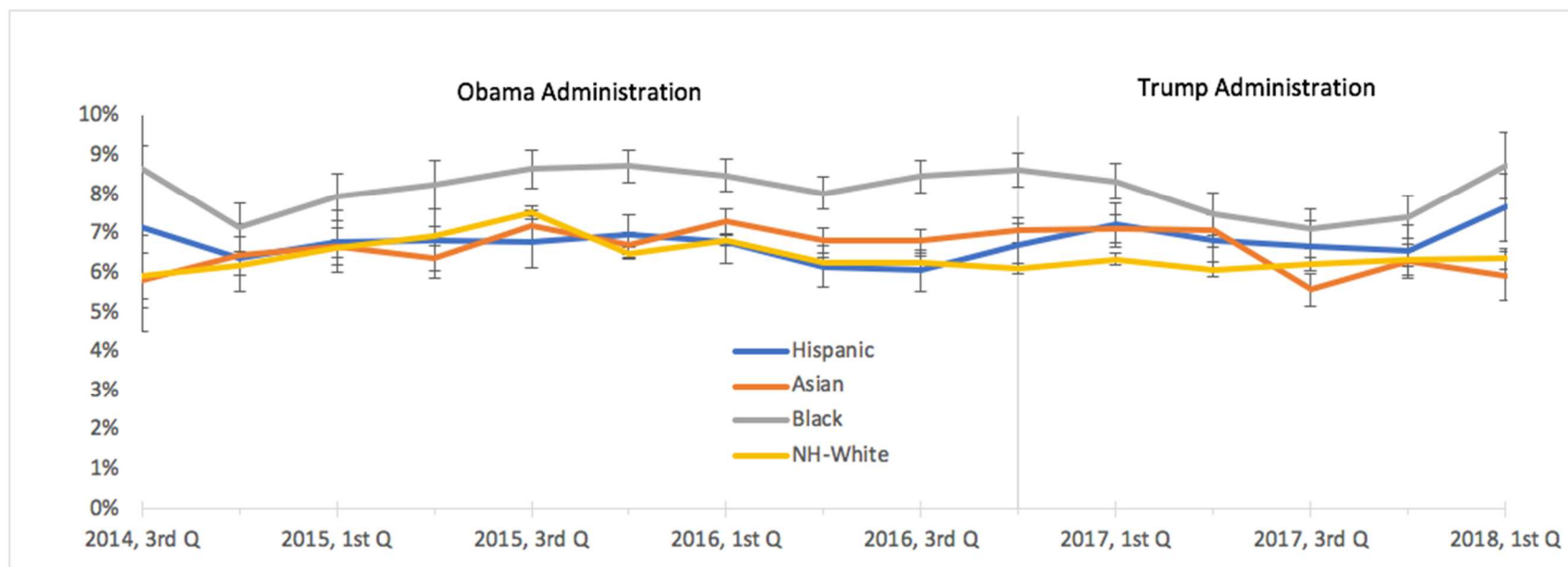


Figure 7. Adjusted Monthly Unit Nonresponse Rate in CPS, by Race/ethnicity and Quarter

Sample: Monthly CPS 2014-2018 (Flood et al, 2018), adults age 18+ who were first interviewed between Sept 2014 and Jan 2017, and followed up as late as March 2018, excluding non-Hispanics identifying as "other" race.

Estimates are adjusted for state of residence, age, sex, education, non-response on age and sex, and month of interview (models available upon request).

Error bars = 95% confidence intervals

41. Figure 8 below (Table A7 in the Appendix) shows adjusted trends for noncitizens and citizens of all racial-ethnic groups. Adjusted unit nonresponse rates for noncitizens and citizens diverge after the start of the Trump administration. Before 2017, the lines for citizens and noncitizens are entangled and the error bars overlap. However, by the 2nd quarter of 2017, in the months following President Trump's inauguration, adjusted unit nonresponse rates among noncitizens increased significantly, rising to levels that were roughly 21 percent higher than seen among citizens. By the first quarter of 2018, they were 30 percent higher.

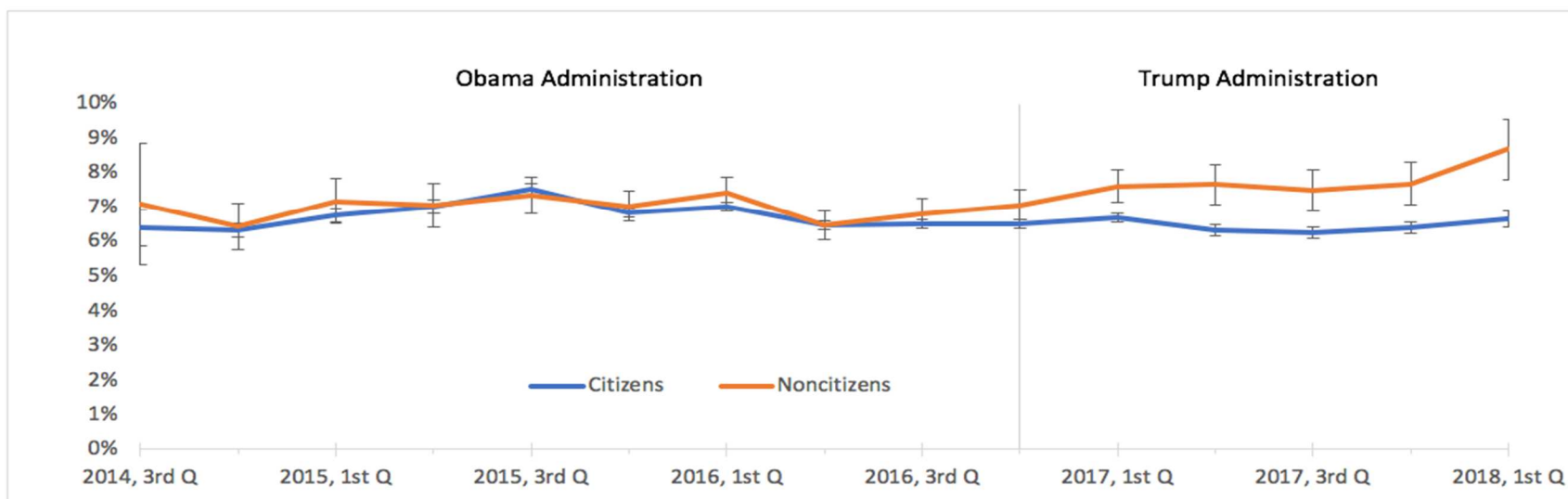


Figure 8. Adjusted Monthly Unit Nonresponse Rate in CPS, by Citizenship and Quarter

Sample: Monthly CPS 2014-2018 (Flood et al, 2018), adults age 18+ who were first interviewed between Sept 2014 and Jan 2017, and followed-up as late as March 2018, excluding non-Hispanics identifying as "other" race.

Estimates are adjusted for state of residence, age, sex, education, non-response on age and sex, and month of interview (models available upon request).

Error bars = 95% confidence intervals

42. Because large shares of Hispanics and Asians are immigrants, I examined these two groups more closely. As shown in Figures 9 and 10 below, the patterns were similar for the two groups in that adjusted unit nonresponse rates were higher for noncitizens than for citizens after the start of the Trump administration. Within each of these groups, there were few significant differences by citizenship before 2016.

43. However, Hispanics differed from Asians with respect to the timing of the trends. Among Hispanic noncitizens, the adjusted unit nonresponse rate increased dramatically during the first quarter of 2018 as seen in Figure 9 (Table A8 in the Appendix). Between the 4th quarter of 2016 and first quarter of 2018, the adjusted unit nonresponse rate among Hispanic noncitizens increased by 43 percent, and two-thirds of this increase occurred during the 1st quarter of 2018.

44. Among Asians, the adjusted unit nonresponse rate increased gradually for noncitizens while it declined among citizens as seen in Figure 10 (Table A8 in the Appendix). This divergence started in 2016, before the start of the Trump administration, although the gap widened in early 2017. Another way Asians differed from Hispanics is that Asian noncitizens did not experience a sharp increase in unit nonresponse during the first quarter of 2018.

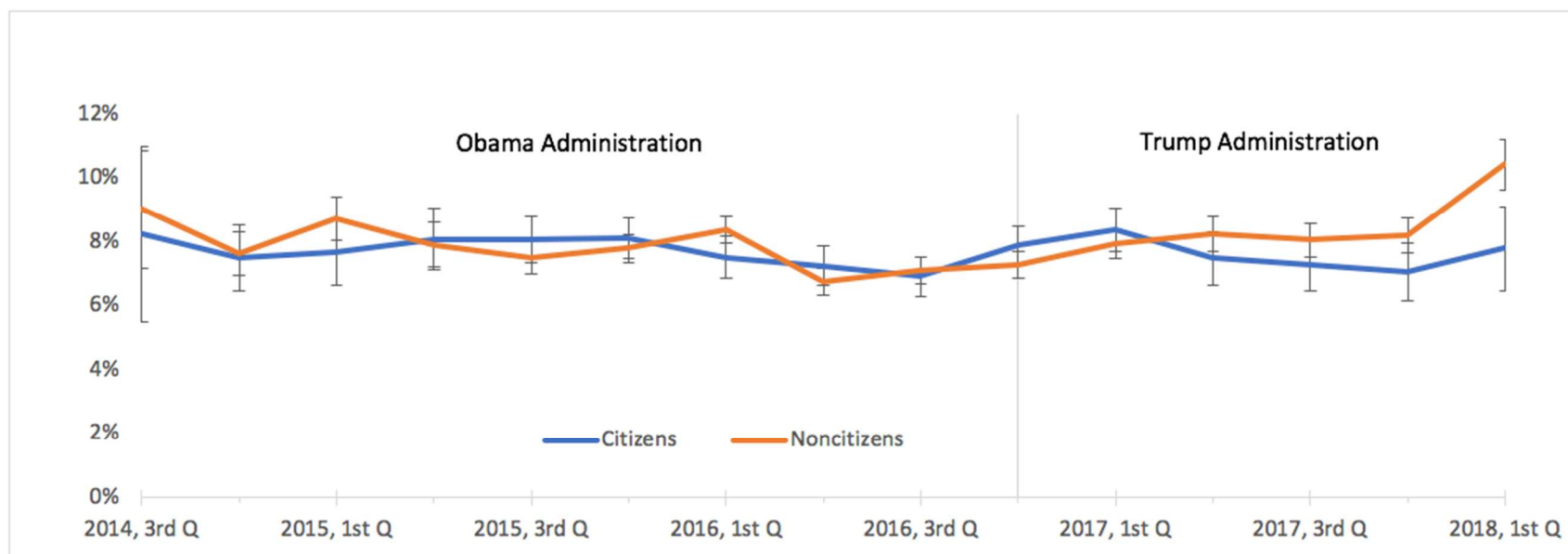


Figure 9. Adjusted Monthly Unit Nonresponse Rate in CPS among Hispanics, by Citizenship and Quarter

Sample: Monthly CPS 2014-2018 (Flood et al, 2018), adults age 18+ who were first interviewed between Sept 2014 and Jan 2017, and followed-up as late as March 2018, excluding non-Hispanics identifying as "other" race.

Estimates are adjusted for state of residence, age, sex, education, non-response on age and sex, and month of interview (models available upon request).

Error bars = 95% confidence intervals

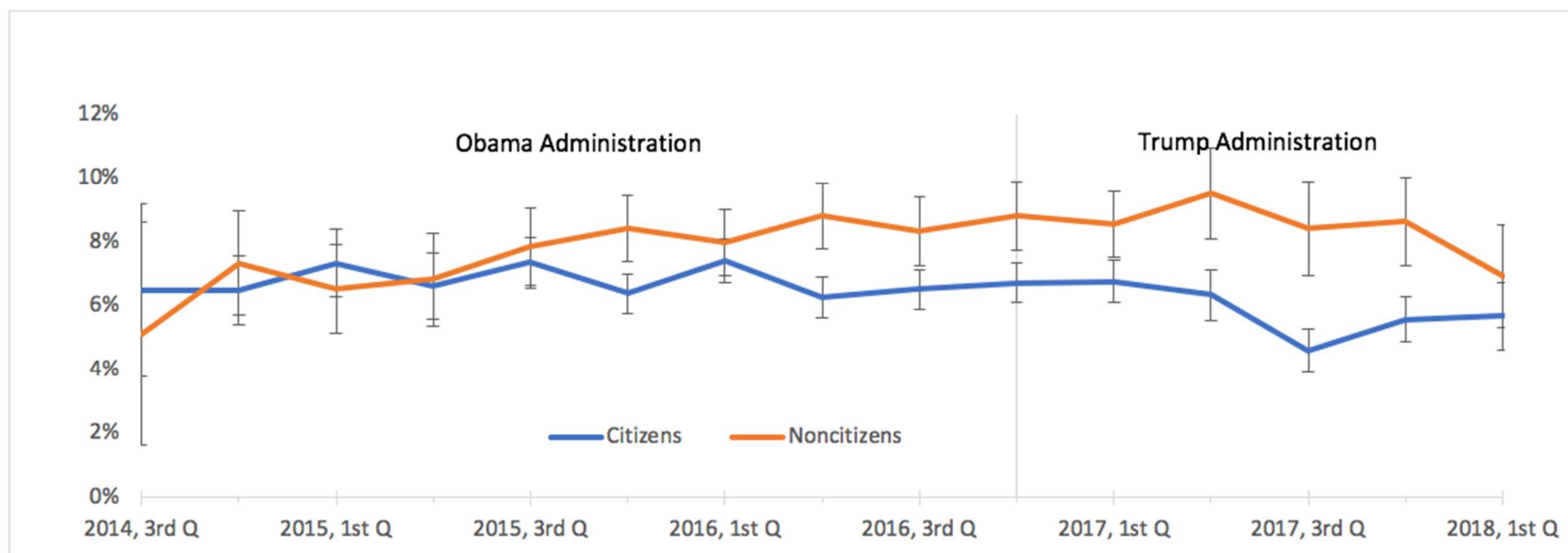


Figure 10. Adjusted Monthly Unit Nonresponse Rate in CPS among Asians, by Citizenship and Quarter

Sample: Monthly CPS 2014-2018 (Flood et al, 2018), adults age 18+ who were first interviewed between Sept 2014 and Jan 2017, and followed-up as late as March 2018, excluding non-Hispanics identifying as "other" race.

Estimates are adjusted for state of residence, age, sex, education, non-response on age and sex, and month of interview (models available upon request).

Error bars = 95% confidence intervals

45. One important question is whether these trends in CPS nonresponse rates reflect changes in nonresponse behavior or migration (*i.e.*, a change of residence that results in an existing CPS respondent not receiving or becoming unable to respond to a follow-up survey). Therefore, in supplementary analyses shown in Figure A1 in the Appendix, I compared annual changes in unit nonresponse due to all causes, unit nonresponse due to a household move, and unit nonresponse for other reasons. For both Hispanics and Asians, the trends in unit nonresponse for “other reasons” are very similar to those shown in Figures 9 and 10. In contrast, the trends in household moves are much flatter and statistical tests reveal no significant differences in the trends by citizenship. This suggests that the results in terms of CPS unit nonresponse rates described above are related to changes in individual nonresponse, and not the result of household migration.

46. A related question is whether the increase in unit nonresponse among Hispanic noncitizens may be due to increases in ICE removals of CPS respondents themselves. However, an examination of the numbers shows that this interpretation is implausible. My supplemental analyses show that the total percentage who dropped out of the CPS by the 8th interview increased by about 7.6 percentage points in the last year among Hispanic noncitizens. In 2016, there were about 12.6 million noncitizen Hispanics living in the country, so this 7.6 percent increase corresponds with roughly 958 thousand people. This is more than ten times the number of all interior ICE removals in 2017 (82 thousand, including all racial and ethnic groups). Thus, the increase in CPS nonresponse among Hispanic noncitizens cannot be plausibly attributed to removals of CPS respondents.

iv. Summary of Unit Nonresponse Data

47. My analysis of nonresponse for follow-up interviews of the CPS shows that unit nonresponse rates differ significantly by race/ethnicity and citizenship status. Unit nonresponse rates for Hispanics are about seven percentage points higher than among non-Hispanic whites, and unit nonresponse rates for blacks are more than ten percentage points higher than non-Hispanic whites. Put another way, Hispanics are approximately 20% more likely than non-Hispanic whites to drop out of the CPS. Additionally, unit nonresponse rates among noncitizens are about 6.5 percentage points higher than among citizens, or in relative terms, a difference of about 17 percent.

48. Further, unit nonresponse rates increased among noncitizens in recent years, particularly since 2017, while remaining relatively flat among citizens. These diverging trends led the gap in unit nonresponse between noncitizens and citizens to double since the last quarter of 2016.

49. Of key importance is that the results show evidence that unit nonresponse rates increased among all noncitizens in 2017, and they sharply increased among Hispanic noncitizens in the first quarter of 2018. The timing of the sharp increase among Hispanic noncitizens is especially noteworthy because it coincides with the discussion of the 2020 citizenship question in the media. Hispanic noncitizens may have felt particularly targeted by this proposed change in the Decennial Census, perhaps because they are more likely to be undocumented than other noncitizens² and have been specifically targeted in speeches made by President Trump. Asian noncitizens, on the other hand, experienced more gradual increases in unit nonresponse starting

² When compared with the total foreign-born population, the 2010 estimates of the unauthorized population suggest that 55% of Mexican foreign born are unauthorized compared with 28% of Central Americans/Caribbeans, 8.5% of Asians, and 10% of all other national origins (Hoefer, M., Rytina, N., and Baker, B.C. 2011. Estimates of the Unauthorized Immigrant Population Residing in the United States: January 2010. Washington, DC: Department of Homeland Security).

as early as 2016. It is difficult to say for certain why unit nonresponse increased earlier for Asian noncitizens than it did for Hispanic noncitizens. Regardless, these patterns are robust to adjustments for shifts in population composition and are unlikely to be attributable to increases in household migration or deportations.

50. Overall, the CPS unit nonresponse data is consistent with the understanding that racial and ethnic minorities are less responsive to a survey concerning a citizenship question, and are more likely to not respond to a U.S. Census Bureau survey containing a citizenship question than are non-Hispanic whites. The same is the case for noncitizens as compared to citizens. Finally, the CPS unit nonresponse data is consistent with the understanding that non-citizens, and particularly, Hispanic non-citizens, have become less responsive to a survey containing questions concerning citizenship since the onset of the Trump administration, particularly during the first quarter of 2018.

B. Item Nonresponse

51. I next examined the likelihood that information about citizenship or place of birth was not supplied by CPS respondents and its value was therefore imputed (i.e. “allocated”) by the Census Bureau. I refer to such occurrences as “item nonresponse”. High rates of item nonresponse on citizenship and place of birth questions would indicate that the citizenship question is sensitive and would raise concerns that adding a citizenship question will not yield accurate citizenship responses.

52. My analysis of item nonresponse was performed on respondents who participated in the CPS, and therefore is selective of willing respondents. I combined nonresponse about place of birth and citizenship because these two questions are part of the same series of questions (both are used to create the final citizenship variable). I limited my analysis to data from the first

CPS interview (month-in-sample = 1) because the citizenship and nativity questions are asked at the first interview and are not repeated in follow-up interviews.

53. Unlike my analysis of unit nonresponse, I was not able to break down the results by citizenship status. The reason is that the public data do not provide information on citizenship status that was not supplied by the respondent. That is, if a CPS respondent returns the survey but fails to answer the citizenship question, we have no way of knowing whether the respondent is a citizen or not, and thus, no way to compare item nonresponse rates among citizens and non-citizens. However, it is possible to assess how more indirect measures – race/ethnicity and household nativity – are related to an individual’s item nonresponse on citizenship and nativity. Household nativity is based on household composition: immigrant households are defined as households that contain at least one foreign-born person, and U.S.-born households contain only U.S.-born persons.

i. Racial/ethnic and Household Nativity Differences in Item Nonresponse

54. The highest item nonresponse rates occurred among groups that have large shares of immigrants: Asians (8.8 percent) and Hispanics (6.7 percent). (See Table A9 and Figure 11 in the Appendix.) Item nonresponse was lower among blacks (4.3 percent) and non-Hispanic whites (3.1 percent). Put another way, Asians and Hispanic CPS respondents are more than twice as likely as non-Hispanic white CPS respondents to skip the citizenship question on the CPS.

55. Item nonresponse was also more than twice as high among those who live in immigrant households (7.6 percent) than those who live in U.S.- born households (3.1 percent) as shown in Table A9 and Figure 12 in the Appendix.

ii. Change Over Time

56. Item nonresponse increased significantly between 2013 and 2018 for Hispanics, blacks and non-Hispanic whites as shown in the data in Table A10 and Figure 13 in the Appendix. Of these three racial/ethnic groups, item nonresponse increased the most among Hispanics, rising by 30 percent (from 5.9% to 7.7%) between 2013 and 2018.

57. Item nonresponse increased even faster among those living in immigrant households as shown in Table A10 and Figure 14 in the Appendix. Among Hispanics in immigrant households, it increased by 40 percent (from 7.5% to 10.6%) between 2013 and 2018. Of note, much of the increase occurred after 2016. For example, among Hispanics in immigrant households, item nonresponse increased by 1.1 percentage points in the three years between 2013 and 2016, but by 2.0 percentage points in the 1.3 years between 2016 and April 2018 (the last month of CPS data available when I conducted the analysis for my original expert report).

iii. Robustness Checks and Adjusted Trends

58. One possible explanation for the increase in item nonresponse on citizenship/nativity is that item nonresponse increased for all CPS survey questions. Could this have occurred among Hispanics, the group with the greatest increases in item nonresponse? To answer this question, I looked at trends in item nonresponse on a somewhat sensitive question that is completely unrelated to immigration: birthdate/age³. As shown in Figure 15 below (and Table A11 in the Appendix), item nonresponse on age increased slightly between 2014 and 2015 but did not increase after 2015.

³ CPS respondents are asked to report their birthdate, and if they refuse or are unable to recall their birthdate, they are asked how old they are. This information is then used to construct the age variable in the CPS.

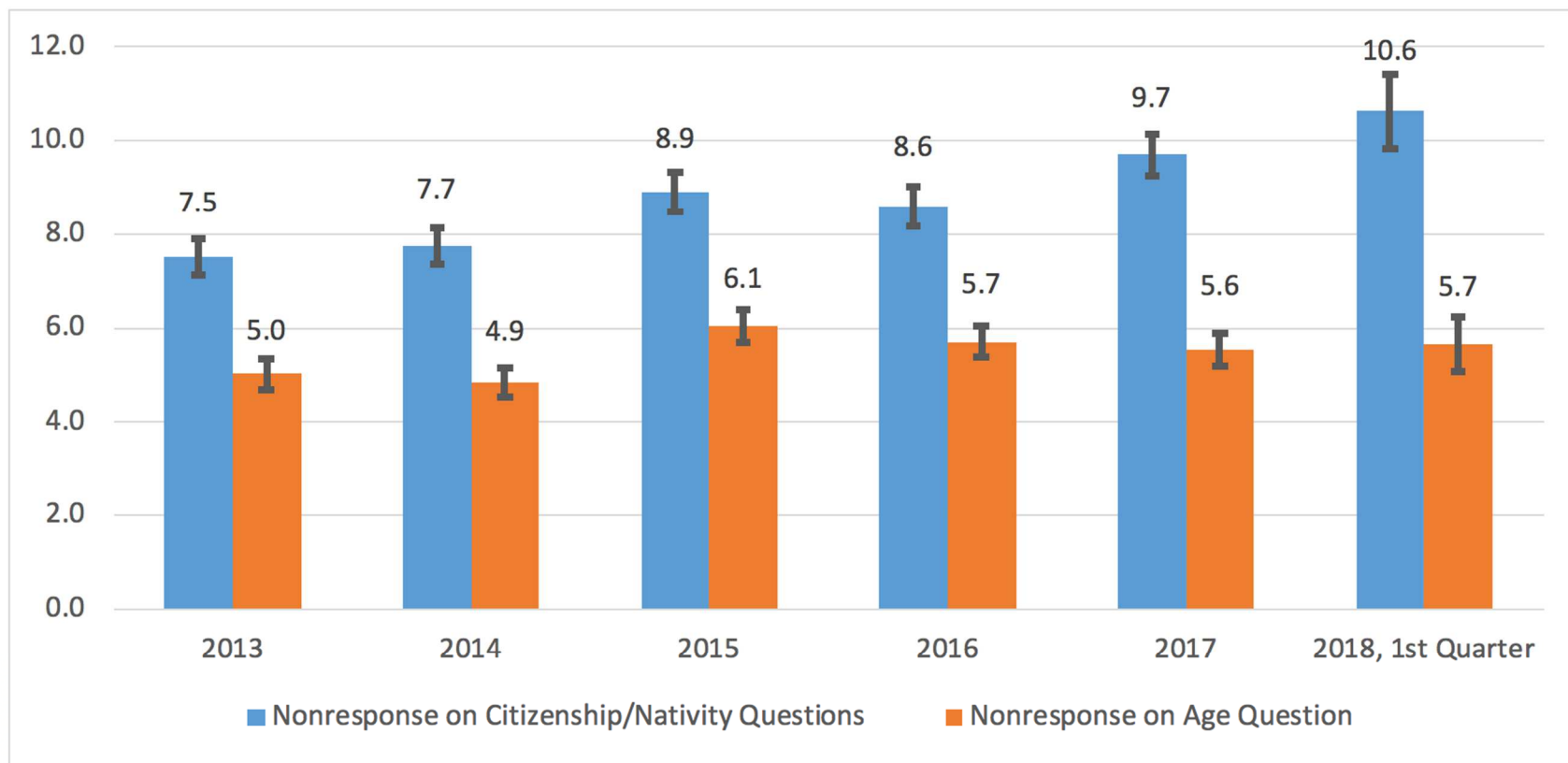


Figure 15. Percentage Item Nonresponse on Citizenship/Nativity and Age in the CPS Among Hispanics Living in Immigrant Households, 2013-2018

Sample: Monthly CPS (Jan-Dec, 2013-2018) (Flood et al, 2018), month-in-sample 1, adults age 18+, excluding non-Hispanics identifying as "other" race.

Error bars = 95% confidence intervals

In contrast, item nonresponse on citizenship/nativity increased both between 2014 and 2015 (when item nonresponse on age also increased) and again between 2016 and 2018. This evidence suggests that the recent increase in item nonresponse on citizenship/nativity was specific to the citizenship question and was not reflective of more general trends in item nonresponse.

59. Another possible explanation for the trends is that they may reflect changes in population composition. As discussed earlier, many factors influence nonresponse. To adjust for these trends, I estimated logistic regression multivariate models that show how year and nativity is related to item nonresponse while accounting for state of residence, age, sex, education, and nonresponse on other items (age and sex). I used the models to generate adjusted estimates of item nonresponse.

60. The trends in item nonresponse among Hispanics and blacks remained even after making these adjustments. The adjusted patterns for all adults shown in Figure A2 below (and also Table A13 in the Appendix) and for those in immigrant households shown in Figure A3 were nearly identical to the unadjusted findings (see also Table A13). Item nonresponse changed slowly until about 2016, after which it increased rapidly, particularly among Hispanics in immigrant households.

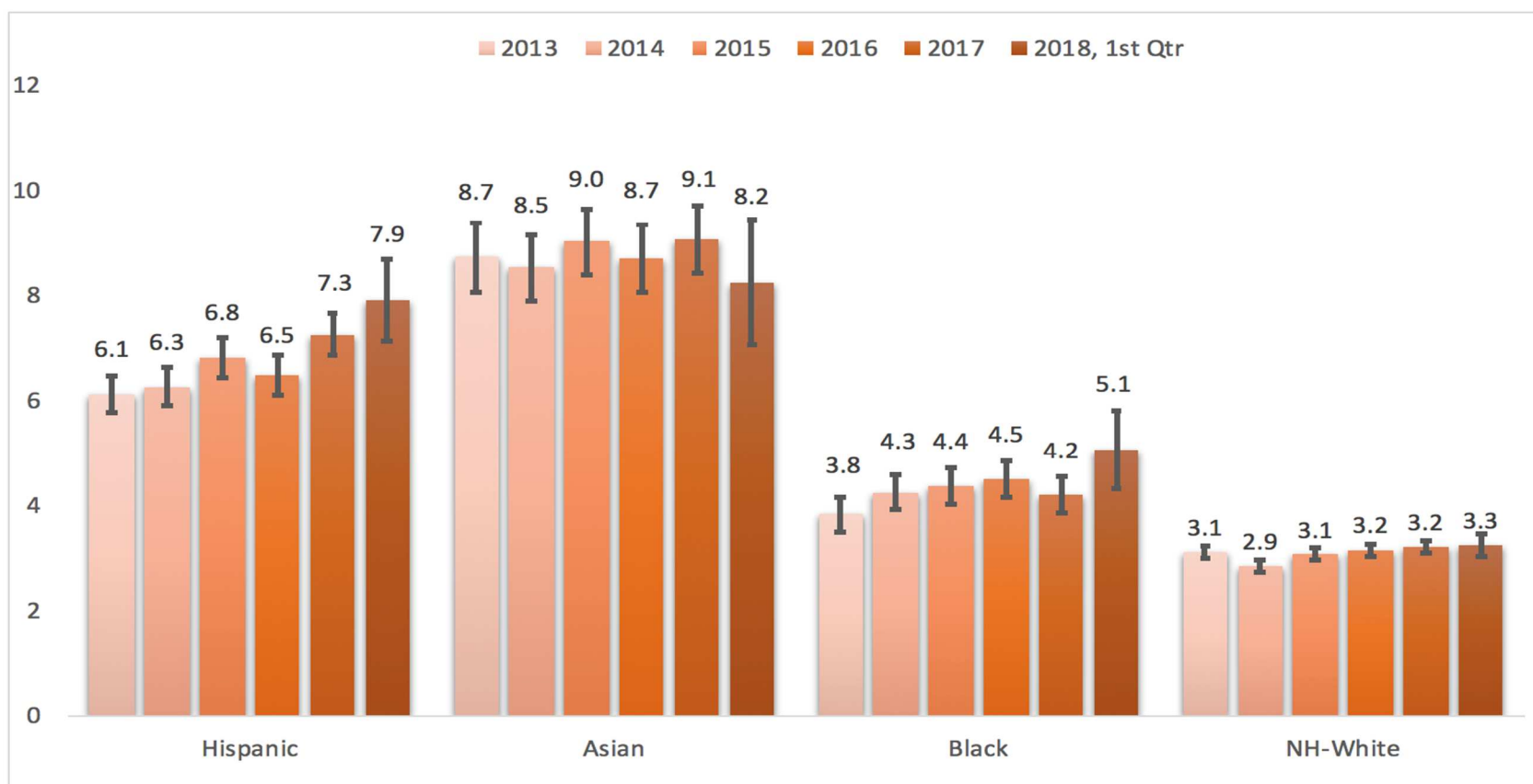


Figure A2. Adjusted Percentage Item Non-Response on Citizenship or Place of Birth in the CPS by Race/Ethnicity and Year, 2013-2018

Sample: Monthly CPS (Jan-Dec, 2013-2018) (Flood et al, 2018), month-in-sample 1, adults age 18+, excluding non-Hispanics identifying as "other" race. Estimates are adjusted for state of residence, age, sex, education, non-response on age and sex, and month of interview (model available upon request).

Error bars = 95% confidence intervals

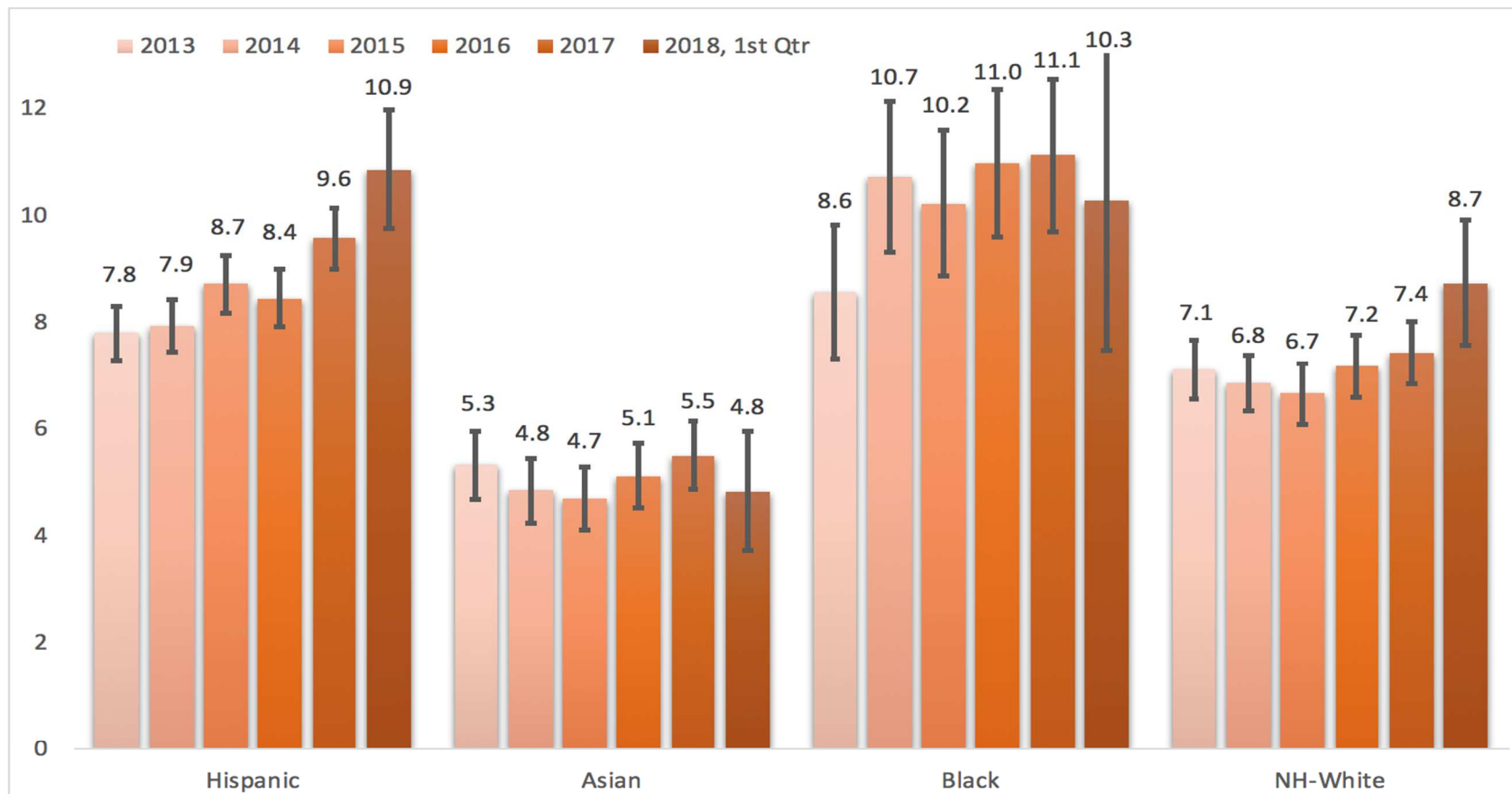


Figure A3. Adjusted Percentage Item Non-Response on Citizenship/Place of Birth in the CPS by Race/Ethnicity and Year, Among Those in Immigrant Households, 2013-2018

Sample: Monthly CPS (Jan-Dec, 2013-2018) (Flood et al, 2018), month-in-sample 1, adults age 18+, excluding non-Hispanics identifying as "other" race. Estimates are adjusted for state of residence, age, sex, education, non-response on age and sex, and month of interview (model available upon request).

Error bars = 95% confidence intervals

61. Finally, to help interpret the trends for Hispanics, I looked more closely at when item nonresponse increased. Figure 16 below (Table A12 in the Appendix) displays adjusted item nonresponse rates among Hispanics by household nativity and quarter. Item nonresponse among Hispanics in immigrant households fluctuated between about 7 and 9 percent between the first quarter of 2013 and the last quarter of 2016. However, it jumped to 10.6 percent in the second quarter of 2017 and reached an all-time high of 11.0 percent in the first quarter of 2018. There was no corresponding change in item nonresponse among those in U.S.-born households.

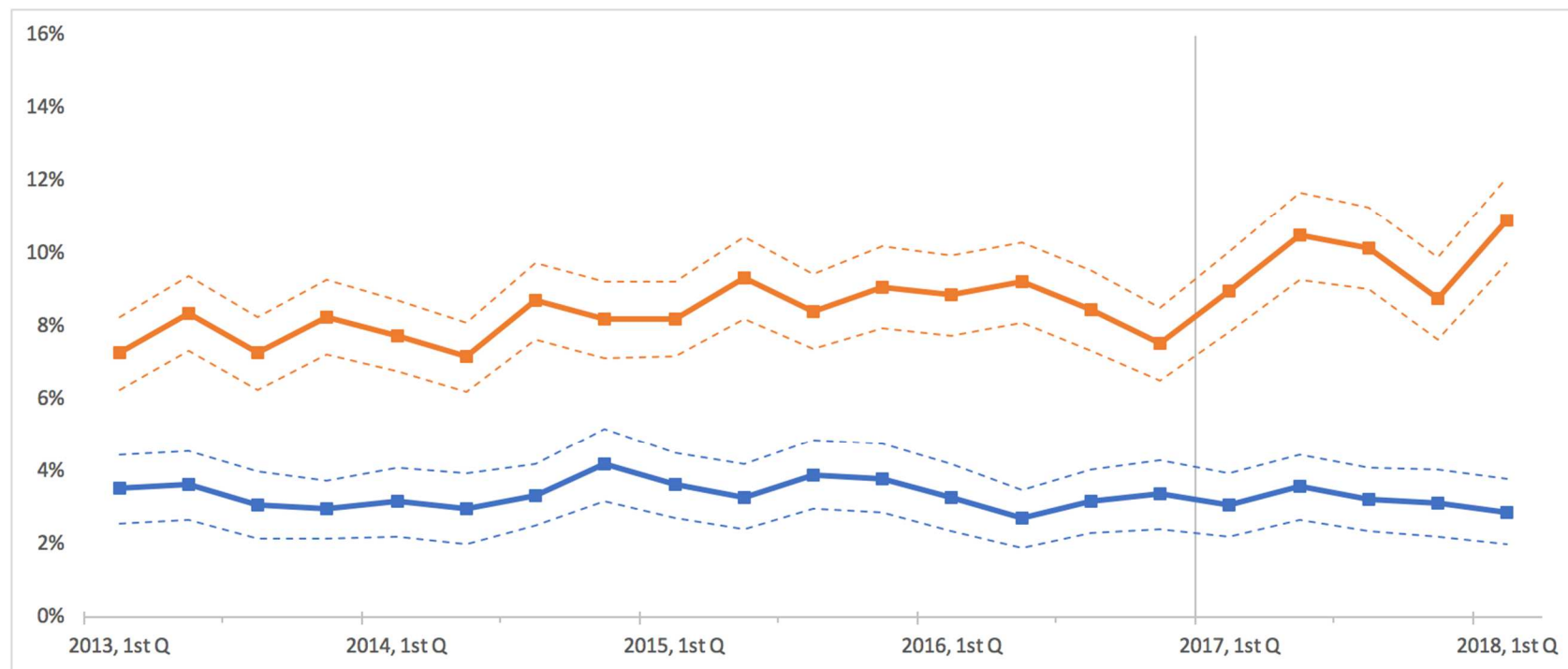


Figure 16. Adjusted Item Non-Response on Citizenship or Place of Birth in the CPS by Household Nativity and Quarter, Hispanics 2013-2018

Sample: Monthly CPS (Jan-Dec, 2013-2018) (Flood et al, 2018), month-in-sample 1, adults age 18+, excluding non-Hispanics identifying as "other" race.

Orange lines = adults living in immigrant households. Blue lines = adults living in U.S.-born households. Dashed lines indicate upper and lower 95% confidence intervals. Estimates are adjusted for state of residence, age, sex, education, non-response on age and sex, and month of interview (model available upon request).

iv. Summary of Item Nonresponse Data

62. My analysis of patterns and trends in item nonresponse on the place of birth and citizenship questions in the CPS show that item nonresponse is significantly higher among Hispanics and Asians than non-Hispanic whites and blacks, and more than twice as high among those living in immigrant households as for those in U.S.-born households.

63. Item nonresponse also increased in recent years, most dramatically among Hispanics living in immigrant households. Notably, item nonresponse on nativity/citizenship questions for this group reached its peak in the first quarter of 2018, while there was no corresponding increase in item nonresponse on questions about age. Finally, these patterns remained even after adjustments were made to account for shifts in population composition. In short, results on item nonresponse suggest that Hispanics in immigrant households became less likely to answer questions about citizenship over the last year or so.

VI. Supplemental Item Nonresponse Analysis of Newly Available Data

64. After I submitted my initial expert report, additional months of CPS data that were not available at the time I drafted my report became publicly available, enabling me to update item nonresponse trends the second quarter of 2018. Additionally, on October 18, 2018. The Census Bureau made public 2017 PUMS American Community Survey (ACS) data, enabling me for the first time to analyze ACS data for a period when Trump has been in office.

A. CPS Item-Nonresponse Through the Second Quarter of 2018

65. In my original report, I analyzed CPS monthly data from January 2013 through March 2018. In my October 23, 2018 supplemental report, I conducted an updated item nonresponse analysis with CPS data from the second quarter of 2018 (April through June).

66. Analysis of the second quarter 2018 CPS data confirmed trend observations and opinions in my initial report. As previously discussed, item nonresponse to citizenship changed slowly until about 2016, after which it increased rapidly for Hispanics, particularly those in immigrant households, reaching its peak in the first two quarters of 2018, while there was no corresponding increase in item nonresponse on questions about age. See Table A1-S and Figures 13-S and 14-S in the Appendix.

67. These patterns remained even after adjustments were made to account for shifts in population composition with respect to state of residence, age, sex, education and nonresponse on age, sex, and month of interview. See Table A2-S and Figures A2-S and A3-S in the Appendix. During the first half of 2018, the CPS adjusted item nonresponse rates to citizenship questions of Hispanics (7.9 percent) and of Hispanics in immigrant households (10.5 percent) were significantly greater than the respective rates in all of the years from 2013 to 2016.

68. I also conducted a difference-in-change analysis of CPS item nonresponse using the adjusted data and found that the change in item nonresponse for Hispanics between 2016 and June 2018 is significantly greater than the change from 2013 to 2015. This is shown in Table S1 in the Appendix. This acceleration of the item nonresponse rate can also be seen among Hispanics living in immigrant households, leading this group to have significantly higher item nonresponse in 2017 and 2018 than in any year from 2013 to 2016 (see Table A2-S and Figure 14-S in the Appendix).

B. ACS Item Nonresponse

69. The American Community Survey (ACS) is important because it is the most similar to the 2020 Census with respect to its mode of data collection. Also, similar to the decennial census, response to the ACS is mandatory by law. Dr. Abowd's January 19, 2018

memorandum to Secretary Ross analyzes ACS data for 2013-2016. I conducted an analysis based the more current 2017 ACS data, which only recently was made available to the public by the Census Bureau on October 18, 2018.

70. Item nonresponse on citizenship increased significantly among Hispanics each year from 2013-2017 as shown in Figure S1 below (and Table S3 in the Appendix). In contrast, item nonresponse did not significantly increase after 2014 among Asians, and it did not significantly increase after 2015 among blacks and among non-Hispanic whites. By 2017, item nonresponse on citizenship was significantly higher among Hispanics than Asians, blacks, and non-Hispanic whites.

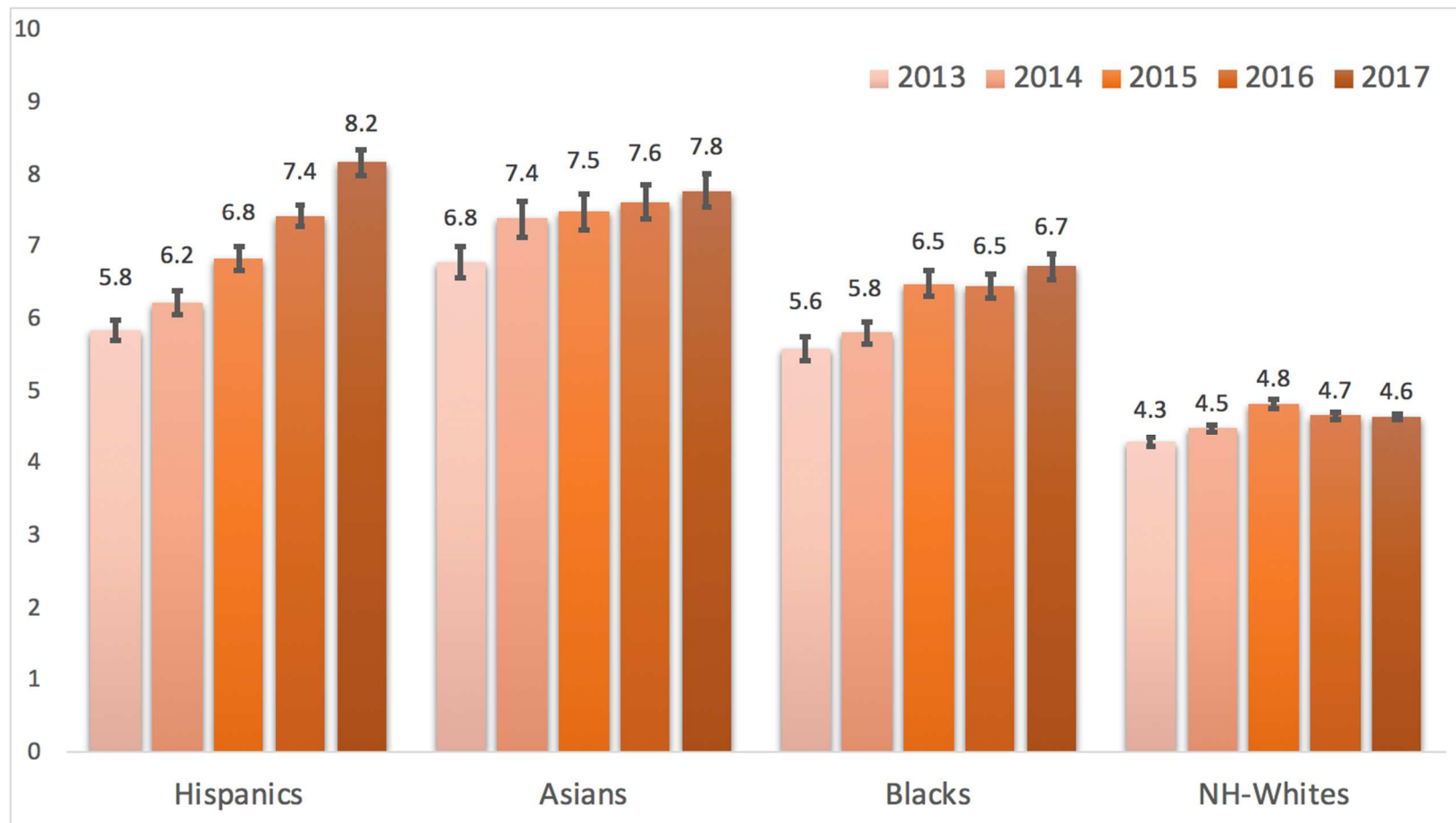


Figure S1. Item Non-Response on Citizenship in the ACS by Race/Ethnicity and Year, Among Adults Age 18+

Source: 2013-2017 1% public-use microdata ACS files (downloaded from the Census FTP download site)
 Error bars = 95% confidence intervals (calculated using ACS replicate weights)

71. Among those in immigrant households, blacks have higher item nonresponse than Hispanics as shown in Figure S2 below (and Table S3 in the Appendix). This differs from all adults, among whom Hispanics have the highest nonresponse rates. However, the temporal patterns among those living in immigrant households are similar as for all adults. Item nonresponse increased significantly every year from 2013 to 2017 among Hispanics as shown in Figure S2. In contrast, item nonresponse did not significantly increase after 2014 among Asians; it did not significantly increase after 2015 among blacks; and it did not significantly increase in any year among non-Hispanic whites.

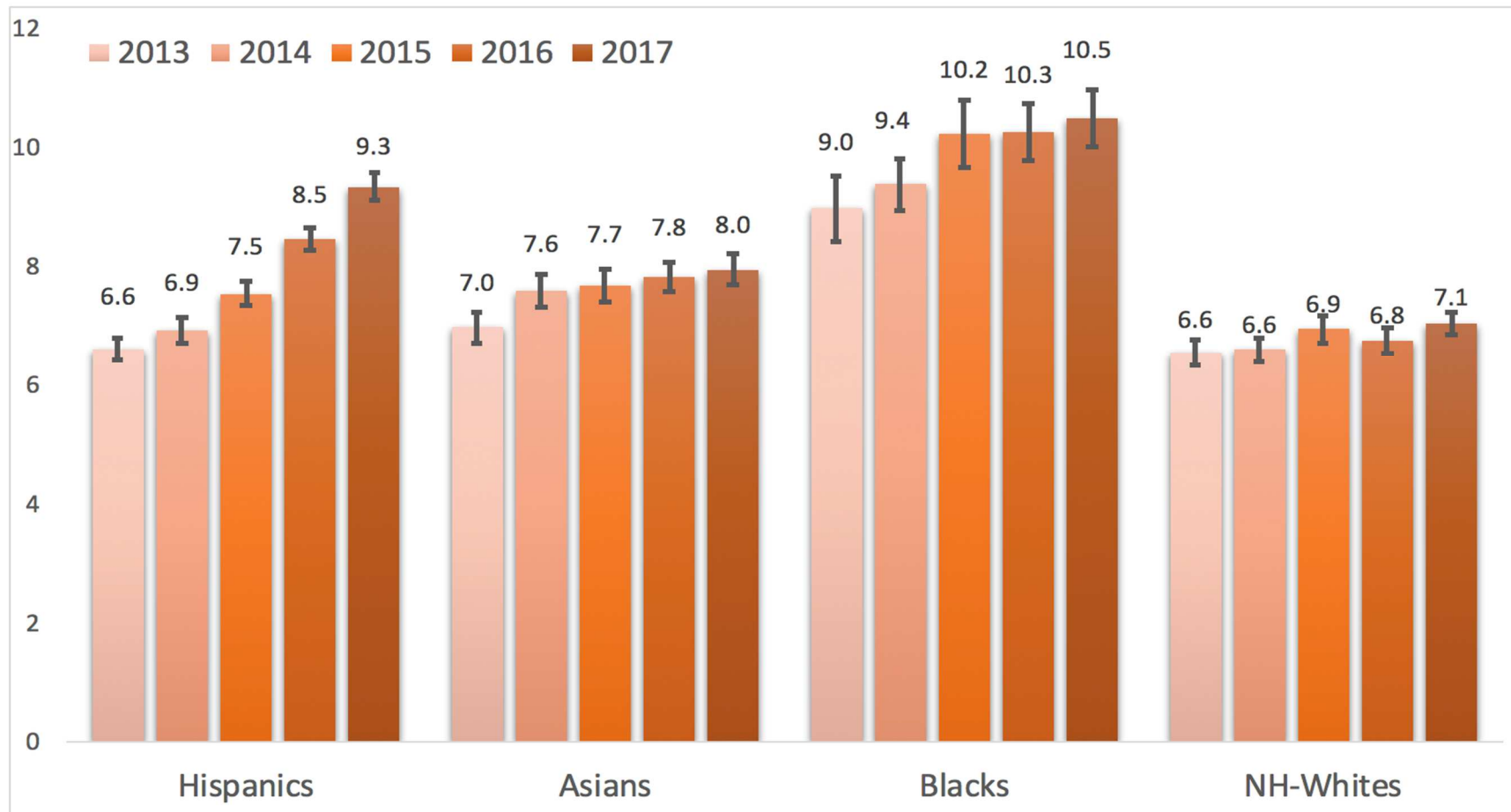


Figure S2. Item Non-Response on Citizenship in the ACS by Race/Ethnicity and Year, Among Adults Age 18+ in immigrant households

Source: 2013-2017 1% public-use microdata ACS files (downloaded from the Census FTP download site)
 Error bars = 95% confidence intervals (calculated using ACS replicate weights)

72. I also examined how item nonresponse on citizenship compares with the other decennial census questions that are asked in the ACS: age, sex, race, Hispanic origin, and housing tenure (rent/own). In the 2017 ACS, for all four racial/ethnic groups, item nonresponse rates on citizenship was significantly higher than any other decennial census item as shown in Figure S3 and Table S4 in the Appendix.

73. Additionally, I examined trends in item nonresponse on all decennial census questions that also are on the ACS among Hispanics to assess whether the increase in nonresponse on the citizenship question is part of a broader pattern of increasing nonresponse. My analysis shows that this question is different from the other decennial census questions. The percentage point change in item nonresponse on the citizenship question increased since 2013 more than it did for the other questions, as shown in Figure S4 below (and Table S5 in the Appendix).

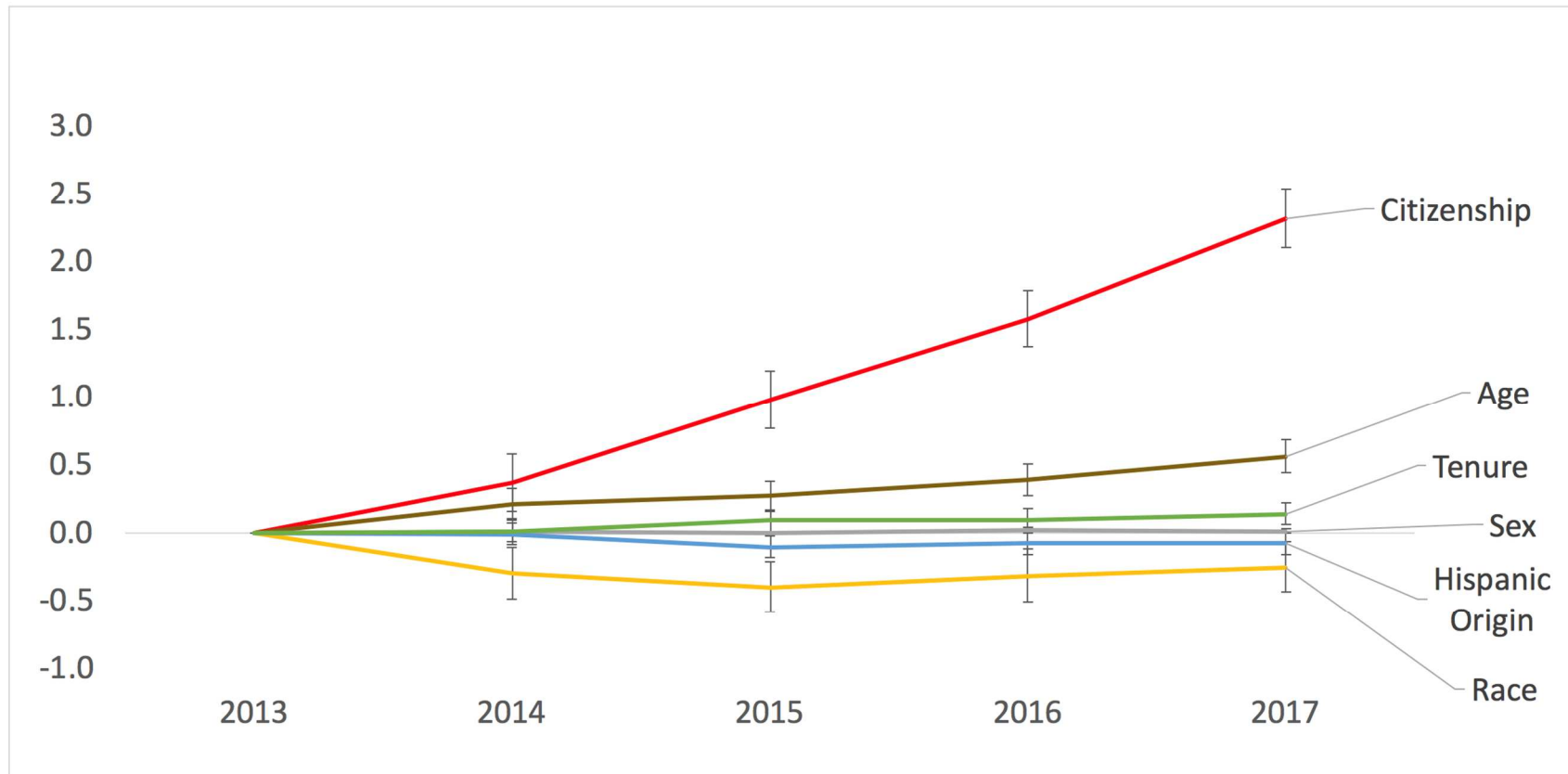


Figure S4. Percentage Point Change Since 2013 in Item Non-Response on Decennial Census Items, by Year, Among Hispanic Adults Age 18+, 2013-2017 ACS

Source: 2013-2017 1% public-use microdata ACS files (downloaded from the Census FTP download site)

Error bars = 95% confidence intervals (calculated using ACS replicate weights)

74. Finally, I conducted a difference-in-change analysis of ACS item nonresponse on citizenship shown in Table S6 in the Appendix. Item nonresponse increased more for Hispanics as a whole as well as for Hispanics in immigrant household between 2015 and 2017 than in the earlier 2013 to 2015 time period.

75. In sum, the item nonresponse trends I identified in my analysis of the ACS data are consistent with the findings of my analysis of the CPS data.

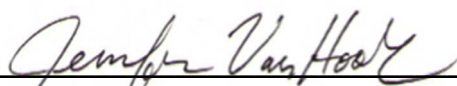
VII. Conclusion

76. In sum, it is my opinion to a strong degree of professional certainty that the overall patterns of unit and item nonresponse seen recently in CPS and ACS surveys are consistent with the understanding that response to Census Bureau surveys has changed for the worse among Hispanics, particularly those in immigrant households. The timing of the change suggests that it is linked to changes in the political and/or policy climate, including the proposal to add the citizenship question to the 2020 Decennial Census. The unit nonresponse data is consistent with the understanding that adding a citizenship question to the Census will reduce nonresponse rates among racial minorities (in particular Hispanics) as compared to non-Hispanic whites, and among noncitizens as compared to citizens. Moreover, the item nonresponse rate estimates raise concerns that adding a citizenship question will not yield accurate citizenship responses for a substantial percentage of certain groups, including Hispanics, Asians, and people living in a household with at least one immigrant.

I declare under penalty of perjury that the foregoing is true and correct.

Dated: October 26, 2018

State College, Pennsylvania



Jennifer Van Hook

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Table A1. Sample Sizes in Current Population Survey

	All	Hispanic	Asian	Black	NH-White
Adults Age 18+					
2013	144,555	17,687	7,327	13,957	105,584
2014	146,035	17,867	7,133	14,575	106,460
2015	142,873	17,745	7,200	14,840	103,088
2016	142,718	17,955	7,456	14,489	102,818
2017	137,423	17,237	7,280	13,816	99,090
2018*	45,072	5,929	2,247	4,388	32,508
Total	758,676	94,420	38,643	76,065	549,548
Adults Age 18+ in Immigrant Households					
2013	27,748	10,970	5,971	2,079	8,728
2014	27,949	11,083	5,810	2,020	9,036
2015	27,538	11,019	5,823	2,074	8,622
2016	27,396	10,968	6,082	2,031	8,315
2017	26,650	10,578	5,917	1,984	8,171
2018*	9,002	3,701	1,848	643	2,810
Total	146,283	58,319	31,451	10,831	45,682

Samples: Monthly CPS (Jan-Dec, 2013-2018) (Flood et al, 2018), month-in-sample 1, adults age 18+, excluding non-Hispanics identifying as "other" race.

*2018 data includes only January, February, March, and April

Table A2. Month and Year of Attempted CPS Interviews by Year of First Interview

Year first interviewed	Month-in-sample							
	1	2	3	4	5	6	7	8
2014	9/2014 – 12/2014	10/2014 – 1/2015	11/2014 – 2/2015	12/2014 – 3/2015	9/2015 – 12/2015	10/2015 – 1/2016	11/2015 – 2/2016	12/2015 – 3/2016
2015	1/2015 – 12/2015	2/2015 – 1/2016	3/2015 – 2/2016	4/2015 – 3/2016	1/2016 – 12/2016	2/2016 – 1/2017	3/2016 – 2/2017	4/2016 – 3/2017
2016	1/2016 – 12/2016	2/2016 – 1/2017	3/2016 – 2/2017	4/2016 – 3/2017	1/2017 – 12/2017	2/2017 – 1/2018	3/2017 – 2/2018	4/2017 – 3/2018
2017	1/2017 – 12/2017	2/2017 – 1/2018	3/2017 – 2/2018	4/2017 – 3/2018	1/2018 – 4/2018	2/2017 – 4/2018	3/2017 – 4/2018	4/2018

Table A3. Percentage Unit Nonresponse by 8th CPS Interview, by Race/Ethnicity and Citizenship

	<i>Estimates for Figure 3</i>				<i>Estimates for Figure 4</i>	
	Hispanic	Asian	Black	NH-White	Citizens	Non-citizens
Percentage	42.4	39.4	46.3	35.4	37.5	44.0
95% CI, lower-bound	41.9	38.7	45.8	35.3	37.4	43.4
95% CI, upper-bound	42.9	40.1	46.8	35.6	37.7	44.7

CI = confidence interval

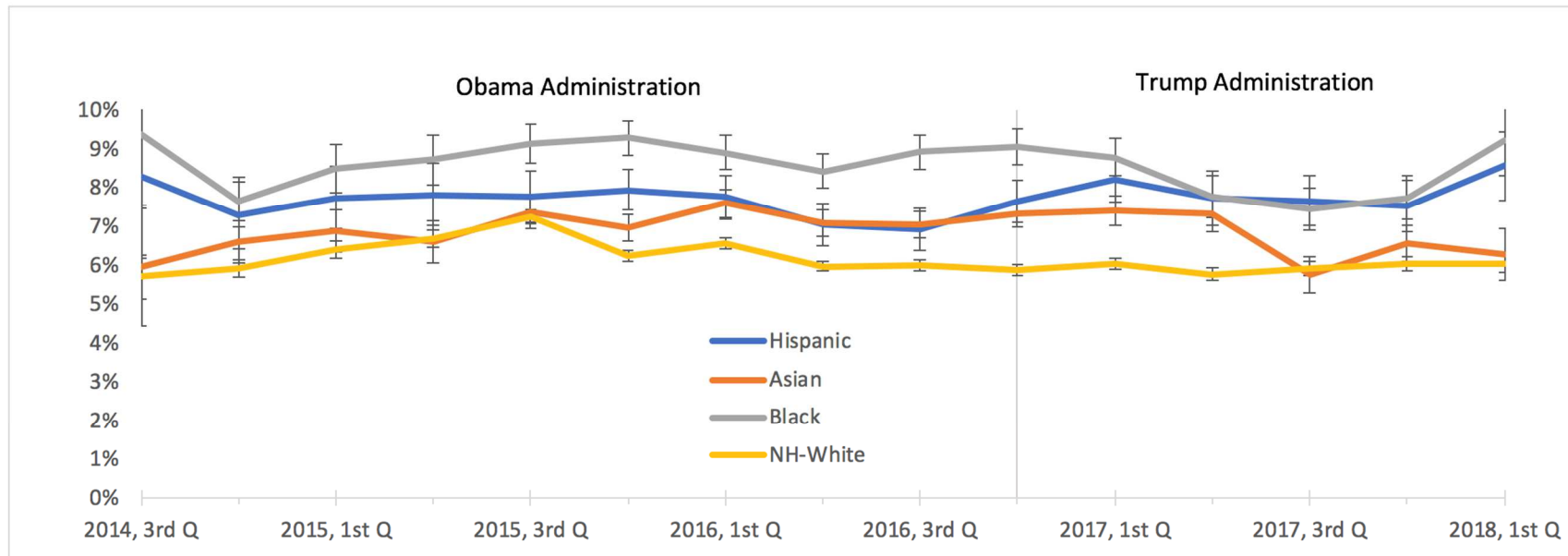


Figure 5-S. Monthly Unit Nonresponse Rate in CPS, by Race/ethnicity and Quarter

Sample: Monthly CPS 2014-2018 (Flood et al, 2018), adults age 18+ who were first interviewed between Sept 2014 and Jan 2017, and followed up as late as March 2018, excluding non-Hispanics identifying as "other" race.

Error bars = 95% confidence intervals

Table A4-S. Monthly Unit Nonresponse Rate in CPS, by Race/ethnicity and Quarter (estimates for Figure 5-S)

	Hispanic			Asian			Black			NH-White		
	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound
2014, 3rd	8.3	6.8	9.8	6.0	3.8	8.1	9.4	7.5	11.3	5.7	5.1	6.3
2014, 4th	7.3	6.8	7.8	6.6	5.7	7.5	7.6	7.0	8.3	5.9	5.7	6.2
2015, 1st	7.8	7.2	8.3	6.9	6.1	7.7	8.5	7.9	9.1	6.4	6.2	6.6
2015, 2nd	7.8	7.3	8.4	6.6	5.8	7.4	8.7	8.1	9.4	6.7	6.5	6.9
2015, 3rd	7.8	7.4	8.2	7.4	6.7	8.0	9.1	8.6	9.7	7.2	7.1	7.4
2015, 4th	7.9	7.6	8.3	7.0	6.4	7.5	9.3	8.8	9.7	6.2	6.1	6.4
2016, 1st	7.8	7.4	8.1	7.6	7.0	8.2	8.9	8.5	9.4	6.6	6.4	6.7
2016, 2nd	7.1	6.7	7.4	7.1	6.5	7.6	8.4	8.0	8.9	6.0	5.8	6.1
2016, 3rd	6.9	6.6	7.3	7.0	6.5	7.6	8.9	8.5	9.4	6.0	5.9	6.1
2016, 4th	7.7	7.3	8.0	7.3	6.8	7.9	9.1	8.6	9.5	5.9	5.7	6.0
2017, 1st	8.2	7.8	8.6	7.4	6.8	8.0	8.8	8.3	9.3	6.1	5.9	6.2
2017, 2nd	7.7	7.3	8.2	7.3	6.6	8.0	7.8	7.2	8.3	5.8	5.6	5.9
2017, 3rd	7.7	7.2	8.1	5.8	5.1	6.4	7.5	6.9	8.0	5.9	5.8	6.1
2017, 4th	7.5	7.0	8.0	6.6	5.9	7.2	7.8	7.2	8.3	6.0	5.9	6.2
2018, 1st	8.6	7.9	9.3	6.3	5.4	7.2	9.2	8.3	10.1	6.1	5.8	6.3

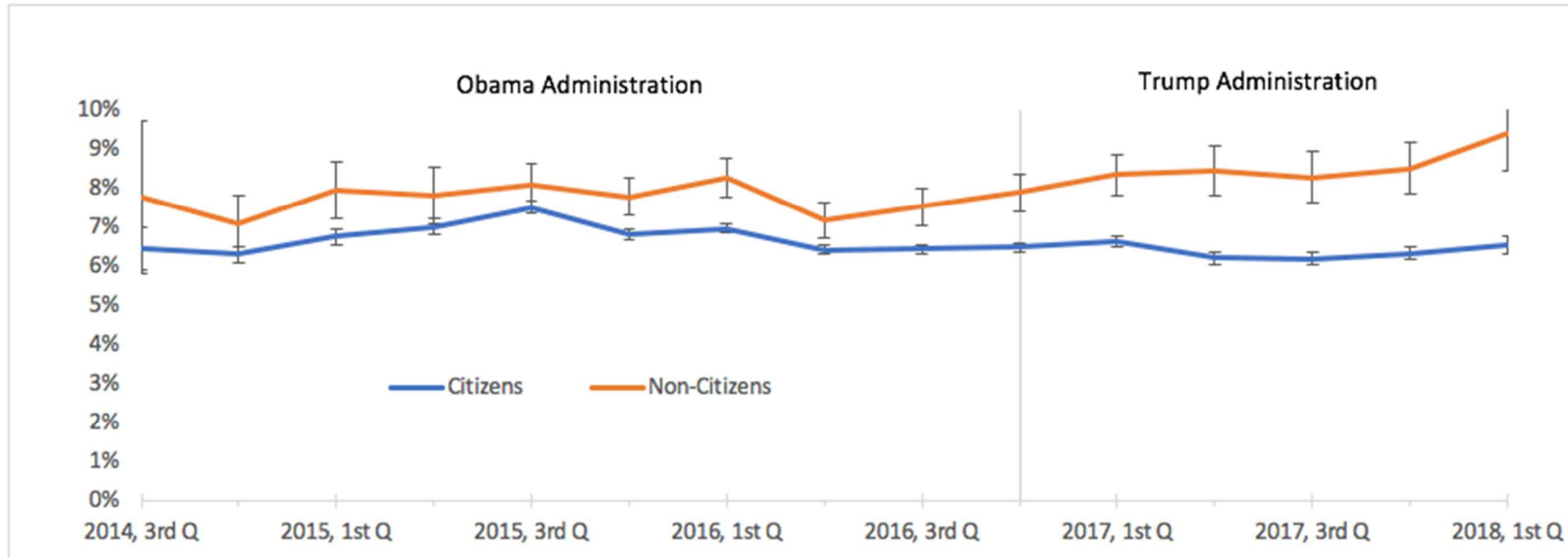


Figure 6. Monthly Unit Nonresponse Rate in CPS, by Citizenship and Quarter

Sample: Monthly CPS 2014-2018 (Flood et al, 2018), adults age 18+ who were first interviewed between Sept 2014 and Jan 2017, and followed up as late as March 2018, excluding non-Hispanics identifying as "other" race.

Error bars = 95% confidence intervals

Table A5. Monthly Unit Nonresponse Rate in CPS, by Citizenship and Quarter (estimates for Figure 6)

Quarter	Citizens			Noncitizens		
	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound
2014, 3rd Q	6.5	5.9	7.0	7.8	5.8	9.7
2014, 4th Q	6.3	6.1	6.5	7.1	6.3	7.8
2015, 1st Q	6.8	6.6	7.0	7.9	7.2	8.7
2015, 2nd Q	7.0	6.8	7.2	7.8	7.1	8.5
2015, 3rd Q	7.5	7.3	7.7	8.1	7.5	8.6
2015, 4th Q	6.8	6.7	6.9	7.8	7.3	8.3
2016, 1st Q	7.0	6.8	7.1	8.3	7.8	8.8
2016, 2nd Q	6.4	6.3	6.6	7.2	6.7	7.6
2016, 3rd Q	6.4	6.3	6.6	7.5	7.1	8.0
2016, 4th Q	6.5	6.4	6.6	7.9	7.4	8.4
2017, 1st Q	6.6	6.5	6.8	8.4	7.8	8.9
2017, 2nd Q	6.2	6.1	6.4	8.4	7.8	9.1
2017, 3rd Q	6.2	6.0	6.4	8.3	7.6	9.0
2017, 4th Q	6.3	6.2	6.5	8.5	7.8	9.2
2018, 1st Q	6.6	6.3	6.8	9.4	8.5	10.4

Lower-bound = lower-bound 95% confidence interval; upper-bound = upper-bound 95% confidence interval

Table A6. Adjusted Monthly Unit Nonresponse Rate in CPS, by Race/ethnicity and Quarter (estimates for Figure 7)

Quarter	Hispanic			Asian			Black			NH-White		
	%	lower	upper	%	lower	upper	%	lower	upper	%	lower	upper
2014, 3rd	7.2	5.9	8.5	5.8	3.8	7.9	8.7	7.0	10.4	5.9	5.4	6.5
2014, 4th	6.4	5.9	6.9	6.4	5.6	7.3	7.2	6.6	7.8	6.2	6.0	6.4
2015, 1st	6.8	6.3	7.3	6.7	5.9	7.5	7.9	7.4	8.5	6.6	6.4	6.9
2015, 2nd	6.8	6.4	7.3	6.4	5.6	7.2	8.3	7.7	8.9	6.9	6.7	7.2
2015, 3rd	6.8	6.4	7.2	7.2	6.6	7.9	8.7	8.2	9.2	7.5	7.4	7.7
2015, 4th	7.0	6.7	7.3	6.7	6.2	7.3	8.7	8.3	9.2	6.5	6.4	6.7
2016, 1st	6.8	6.5	7.1	7.3	6.8	7.9	8.5	8.1	8.9	6.8	6.7	7.0
2016, 2nd	6.2	5.9	6.5	6.8	6.3	7.4	8.0	7.6	8.5	6.3	6.1	6.4
2016, 3rd	6.1	5.8	6.4	6.8	6.3	7.4	8.5	8.0	8.9	6.3	6.1	6.4
2016, 4th	6.7	6.4	7.0	7.1	6.6	7.6	8.6	8.2	9.1	6.1	6.0	6.3
2017, 1st	7.2	6.9	7.6	7.1	6.6	7.7	8.3	7.9	8.8	6.4	6.2	6.5
2017, 2nd	6.8	6.4	7.2	7.1	6.4	7.8	7.5	7.0	8.1	6.1	5.9	6.3
2017, 3rd	6.7	6.3	7.1	5.6	5.0	6.2	7.1	6.6	7.7	6.2	6.1	6.4
2017, 4th	6.6	6.2	7.0	6.3	5.7	6.9	7.4	6.9	8.0	6.3	6.2	6.5
2018, 1st	7.7	7.1	8.3	5.9	5.1	6.8	8.8	7.9	9.6	6.4	6.1	6.6

Lower-bound = lower-bound 95% confidence interval; upper-bound = upper-bound 95% confidence interval

Table A7. Adjusted Monthly Unit Nonresponse Rate in CPS, by Citizenship and Quarter
(estimates for Figure 8)

Quarter	Citizens			Noncitizens		
	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound
2014, 3rd Q	6.4	5.9	7.0	7.1	5.3	8.9
2014, 4th Q	6.3	6.1	6.5	6.5	5.8	7.1
2015, 1st Q	6.8	6.6	7.0	7.2	6.5	7.8
2015, 2nd Q	7.0	6.8	7.2	7.1	6.4	7.7
2015, 3rd Q	7.5	7.4	7.7	7.3	6.8	7.9
2015, 4th Q	6.9	6.7	7.0	7.0	6.6	7.5
2016, 1st Q	7.0	6.9	7.1	7.4	7.0	7.9
2016, 2nd Q	6.5	6.4	6.6	6.5	6.1	6.9
2016, 3rd Q	6.5	6.4	6.6	6.8	6.4	7.3
2016, 4th Q	6.5	6.4	6.7	7.1	6.6	7.5
2017, 1st Q	6.7	6.6	6.8	7.6	7.1	8.1
2017, 2nd Q	6.3	6.2	6.5	7.7	7.1	8.3
2017, 3rd Q	6.3	6.1	6.4	7.5	6.9	8.1
2017, 4th Q	6.4	6.2	6.6	7.7	7.1	8.3
2018, 1st Q	6.7	6.4	6.9	8.7	7.8	9.6

Lower-bound = lower-bound 95% confidence interval; upper-bound = upper-bound 95% confidence interval

Table A8. Adjusted Monthly Unit Nonresponse Rate in CPS among Hispanics and Asians, by Citizenship and Quarter

Quarter	<i>Hispanics (Estimates for Figure 9)</i>						<i>Asians (Estimates for Figure 10)</i>					
	Citizens			Noncitizens			Citizens			Noncitizens		
	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound
2014, 3rd Q	8.3	6.4	10.1	9.0	6.3	11.8	6.5	3.8	9.2	5.1	1.7	8.6
2014, 4th Q	7.5	6.8	8.2	7.6	6.6	8.7	6.5	5.4	7.6	7.3	5.7	9.0
2015, 1st Q	7.7	7.0	8.3	8.7	7.7	9.8	7.3	6.3	8.4	6.5	5.2	7.9
2015, 2nd Q	8.1	7.4	8.8	7.9	7.0	8.9	6.6	5.6	7.7	6.8	5.4	8.3
2015, 3rd Q	8.1	7.5	8.6	7.5	6.8	8.2	7.4	6.6	8.2	7.9	6.6	9.1
2015, 4th Q	8.1	7.7	8.5	7.8	7.2	8.4	6.4	5.8	7.0	8.4	7.4	9.5
2016, 1st Q	7.5	7.1	7.9	8.4	7.7	9.1	7.4	6.8	8.1	8.0	7.0	9.0
2016, 2nd Q	7.3	6.8	7.7	6.8	6.2	7.4	6.3	5.6	6.9	8.8	7.8	9.9
2016, 3rd Q	6.9	6.5	7.3	7.1	6.5	7.7	6.5	5.9	7.1	8.3	7.3	9.4
2016, 4th Q	7.9	7.5	8.3	7.3	6.7	7.9	6.7	6.1	7.3	8.8	7.7	9.9
2017, 1st Q	8.4	7.9	8.8	7.9	7.2	8.6	6.8	6.1	7.4	8.6	7.5	9.6
2017, 2nd Q	7.5	6.9	8.0	8.2	7.4	9.1	6.3	5.5	7.1	9.5	8.1	10.9
2017, 3rd Q	7.3	6.8	7.8	8.1	7.2	8.9	4.6	3.9	5.3	8.4	7.0	9.9
2017, 4th Q	7.1	6.5	7.6	8.2	7.3	9.1	5.6	4.9	6.3	8.6	7.2	10.0
2018, 1st Q	7.8	7.0	8.6	10.4	9.1	11.8	5.7	4.6	6.7	6.9	5.3	8.5

Lower-bound = lower-bound 95% confidence interval; upper-bound = upper-bound 95% confidence interval

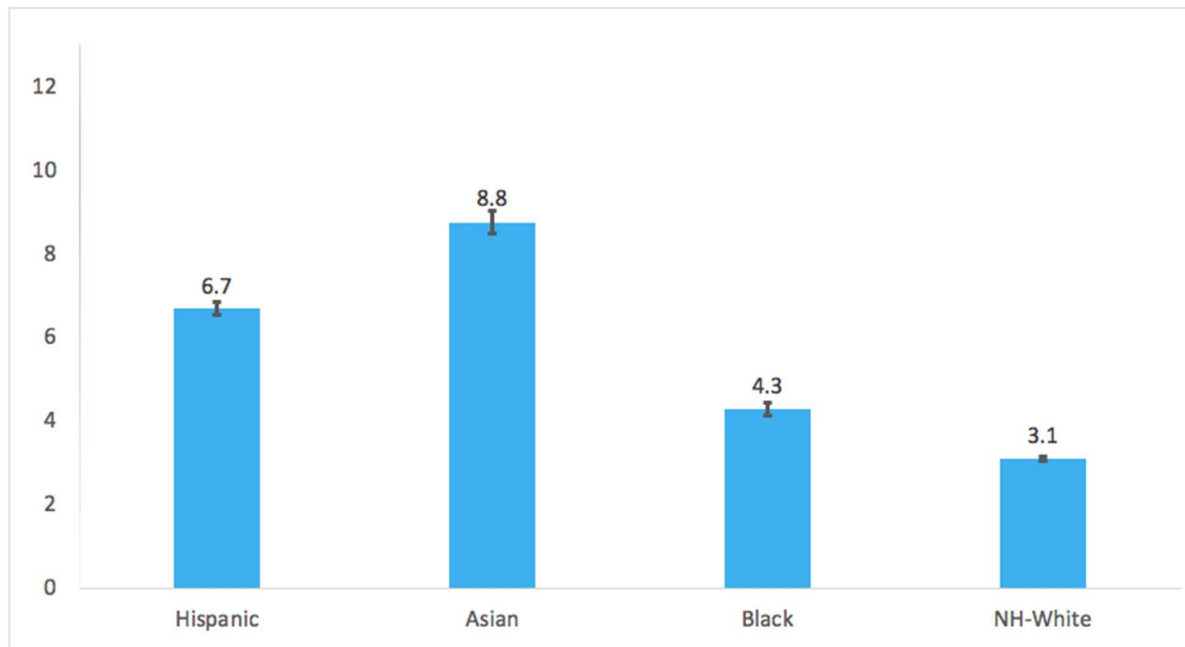


Figure 11. Percentage Item Non-response on Citizenship/Nativity Questions in CPS, by Race/Ethnicity

Sample: Monthly CPS 2014-2018 (Flood et al, 2018), adults age 18+ who were first interviewed between Sept 2014 and March 2018, excluding non-Hispanics identifying as "other" race.
 Error bars = 95% confidence intervals

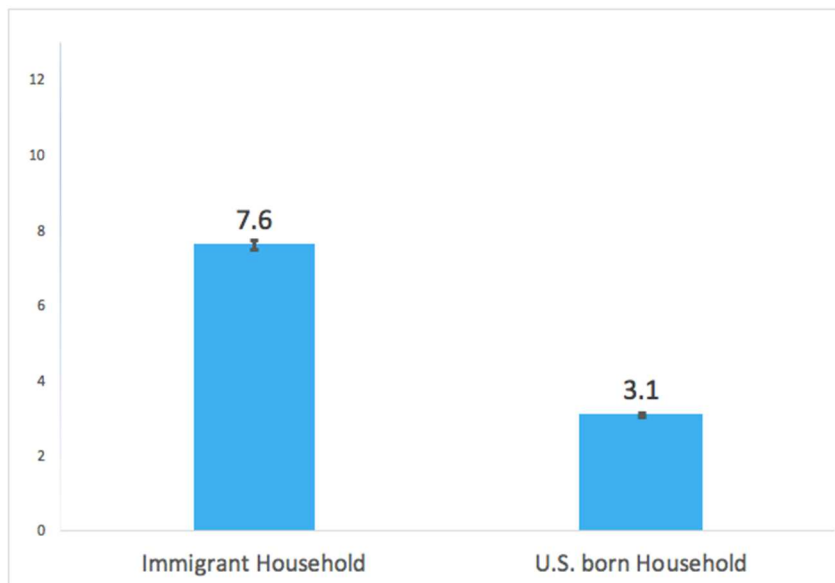


Figure 12. Percentage Item Non-response on Citizenship/Nativity Questions in CPS, by Household Nativity

Sample: Monthly CPS (Jan-Dec, 2013-2018) (Flood et al, 2018), month-in-sample 1, adults age 18+, excluding non-Hispanics identifying as "other" race.
Error bars = 95% confidence intervals

Table A9. Percentage Item Nonresponse on Citizenship/Nativity in the CPS, by Race/Ethnicity and Household Nativity

	<i>Estimates for Figure 11</i>				<i>Estimates for Figure 12</i>	
	Hispanic	Asian	Black	NH-White	Immigrant HHs	U.S-born HHs
Percentage	6.7	8.8	4.3	3.1	7.6	3.1
95% CI, lower-bound	6.5	8.5	4.1	3.1	7.5	3.1
95% CI, upper-bound	6.9	9.1	4.4	3.1	7.8	3.1

CI = confidence interval

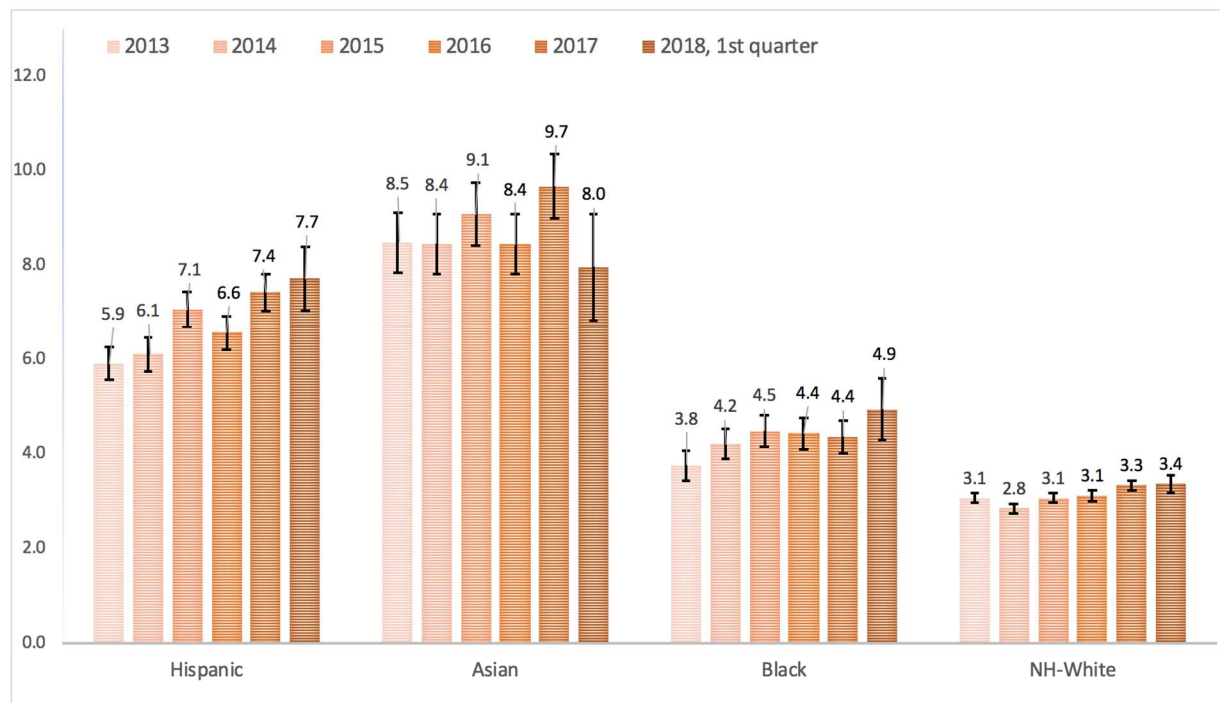


Figure 13. Percentage Item Non-Response on Citizenship or Place of Birth in the CPS by Race/Ethnicity and Year, 2013-2018

Sample: Monthly CPS (Jan-Dec, 2013-2018) (Flood et al, 2018), month-in-sample 1, adults age 18+, excluding non-Hispanics identifying as "other" race.

Error bars = 95% confidence intervals

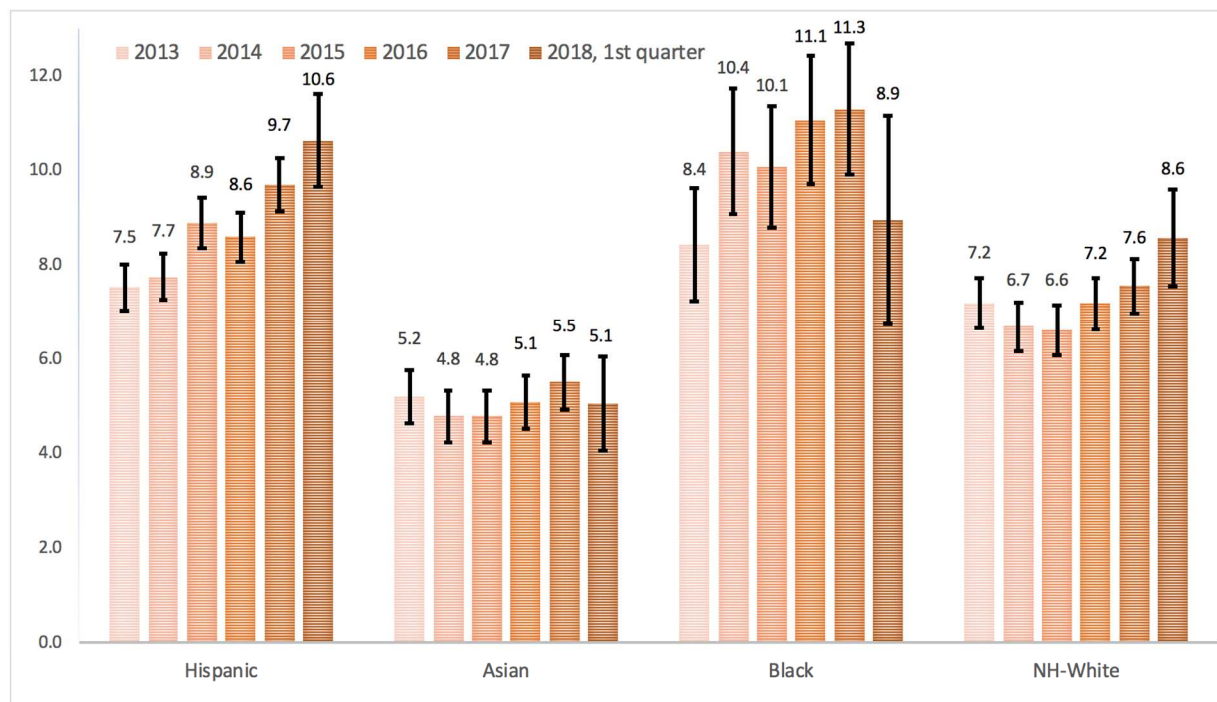


Figure 14. Percentage Item Non-Response on Citizenship or Place of Birth in the CPS by Race/Ethnicity and Year, Among Those in Immigrant Households, 2013-2018

Sample: Monthly CPS (Jan-Dec, 2013-2018) (Flood et al, 2018), month-in-sample 1, adults age 18+, excluding non-Hispanics identifying as "other" race.

Error bars = 95% confidence intervals

Table A10. Item Nonresponse on Citizenship/Nativity in CPS, by Race/ethnicity, Household Nativity, and Year

	Hispanic			Asian			Black			NH-White		
	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound
<i>All Adults (Estimates for Figure 13)</i>												
2013	5.9	5.5	6.2	8.5	7.8	9.1	3.8	3.4	4.1	3.1	3.0	3.2
2014	6.1	5.7	6.4	8.4	7.8	9.1	4.2	3.9	4.5	2.8	2.7	2.9
2015	7.1	6.7	7.4	9.1	8.4	9.7	4.5	4.1	4.8	3.1	3.0	3.2
2016	6.6	6.2	6.9	8.4	7.8	9.1	4.4	4.1	4.8	3.1	3.0	3.2
2017	7.4	7.0	7.8	9.7	9.0	10.3	4.4	4.0	4.7	3.3	3.2	3.4
2018*	7.7	7.0	8.4	8.0	6.8	9.1	4.9	4.3	5.6	3.4	3.2	3.6
<i>Adults in immigrant households (Estimates for Figure 14)</i>												
2013	7.5	7.0	8.0	5.2	4.6	5.8	8.4	7.2	9.6	7.2	6.7	7.7
2014	7.7	7.3	8.2	4.8	4.2	5.3	10.4	9.1	11.7	6.7	6.2	7.2
2015	8.9	8.4	9.4	4.8	4.2	5.3	10.1	8.8	11.4	6.6	6.1	7.1
2016	8.6	8.1	9.1	5.1	4.5	5.6	11.1	9.7	12.4	7.2	6.6	7.7
2017	9.7	9.1	10.3	5.5	4.9	6.1	11.3	9.9	12.7	7.6	7.0	8.1
2018*	10.6	9.6	11.6	5.1	4.1	6.1	8.9	6.7	11.1	8.6	7.5	9.6

Lower-bound = lower-bound 95% confidence interval; upper-bound = upper-bound 95% confidence interval

*2018 data includes only January, February, March, and April

Table A11. Item Nonresponse on Citizenship/Nativity and Age in CPS Among Hispanics in Immigrant Households (Estimates for Figure 15)

Year	Citizenship/Place of Birth			Age		
	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound
2013	7.5	7.1	7.9	5.0	4.7	5.4
2014	7.7	7.4	8.1	4.9	4.5	5.2
2015	8.9	8.5	9.3	6.1	5.7	6.4
2016	8.6	8.2	9.0	5.7	5.4	6.1
2017	9.7	9.3	10.2	5.6	5.2	5.9
2018*	10.6	9.9	11.4	5.7	5.1	6.2

Lower-bound = lower-bound 95% confidence interval; upper-bound = upper-bound 95% confidence interval

*2018 data includes only January, February, March, and April

Table A12. Adjusted Item Nonresponse on Citizenship/Nativity among Hispanics, by Household Nativity and Quarter (estimates for Figure 16)

Quarter	U.S.-born Households			Immigrant Households		
	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound
2013, 1st	3.5	2.6	4.5	7.3	6.3	8.3
2013, 2nd	3.6	2.7	4.6	8.4	7.3	9.4
2013, 3rd	3.1	2.2	4.0	7.3	6.2	8.3
2013, 4th	3.0	2.2	3.8	8.3	7.3	9.3
2014, 1st	3.2	2.2	4.1	7.7	6.8	8.7
2014, 2nd	3.0	2.0	4.0	7.2	6.2	8.1
2014, 3rd	3.4	2.5	4.2	8.7	7.7	9.8
2014, 4th	4.2	3.2	5.2	8.2	7.1	9.2
2015, 1st	3.6	2.7	4.5	8.2	7.2	9.2
2015, 2nd	3.3	2.4	4.2	9.3	8.2	10.5
2015, 3rd	3.9	3.0	4.9	8.4	7.4	9.4
2015, 4th	3.8	2.9	4.8	9.1	8.0	10.2
2016, 1st	3.3	2.4	4.2	8.9	7.7	10.0
2016, 2nd	2.7	1.9	3.5	9.2	8.1	10.3
2016, 3rd	3.2	2.3	4.1	8.4	7.4	9.5
2016, 4th	3.4	2.4	4.3	7.5	6.5	8.5
2017, 1st	3.1	2.2	4.0	9.0	7.8	10.1
2017, 2nd	3.6	2.7	4.5	10.5	9.3	11.7
2017, 3rd	3.3	2.4	4.1	10.2	9.0	11.3
2017, 4th	3.1	2.2	4.0	8.8	7.6	9.9
2018, 1st	2.9	2.0	3.8	10.9	9.7	12.1

Lower-bound = lower-bound 95% confidence interval; upper-bound = upper-bound 95% confidence interval.

Table A13-S. Adjusted Item Nonresponse on Citizenship/Nativity in CPS, by Race/ethnicity, Household Nativity, and Year

	Hispanic			Asian			Black			NH-White		
	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound
<i>All Adults (Estimates for Figure A2)</i>												
2013	6.1	5.8	6.5	8.7	8.1	9.4	3.8	3.5	4.2	3.1	3.0	3.2
2014	6.3	5.9	6.6	8.5	7.9	9.2	4.3	3.9	4.6	2.9	2.8	3.0
2015	6.8	6.4	7.2	9.0	8.4	9.7	4.4	4.0	4.7	3.1	3.0	3.2
2016	6.5	6.1	6.9	8.7	8.1	9.3	4.5	4.1	4.9	3.2	3.0	3.3
2017	7.3	6.9	7.7	9.1	8.4	9.7	4.2	3.8	4.5	3.2	3.1	3.3
2018*	7.9	7.1	8.7	8.2	7.1	9.4	5.1	4.3	5.8	3.3	3.0	3.5
<i>Adults in immigrant households (Estimates for Figure A3)</i>												
2013	7.8	7.3	8.3	5.3	4.7	5.9	8.6	7.3	9.8	7.1	6.5	7.7
2014	7.9	7.4	8.4	4.8	4.2	5.4	10.7	9.3	12.1	6.8	6.3	7.4
2015	8.7	8.2	9.2	4.7	4.1	5.3	10.2	8.9	11.6	6.7	6.1	7.2
2016	8.4	7.9	9.0	5.1	4.5	5.7	11.0	9.6	12.4	7.2	6.6	7.7
2017	9.6	9.0	10.1	5.5	4.9	6.1	11.1	9.7	12.5	7.4	6.8	8.0
2018*	10.9	9.7	12.0	4.8	3.7	5.9	10.3	7.5	13.1	8.7	7.5	9.9

Lower-bound = lower-bound 95% confidence interval; upper-bound = upper-bound 95% confidence interval

*2018 data includes only January, February, March, and April

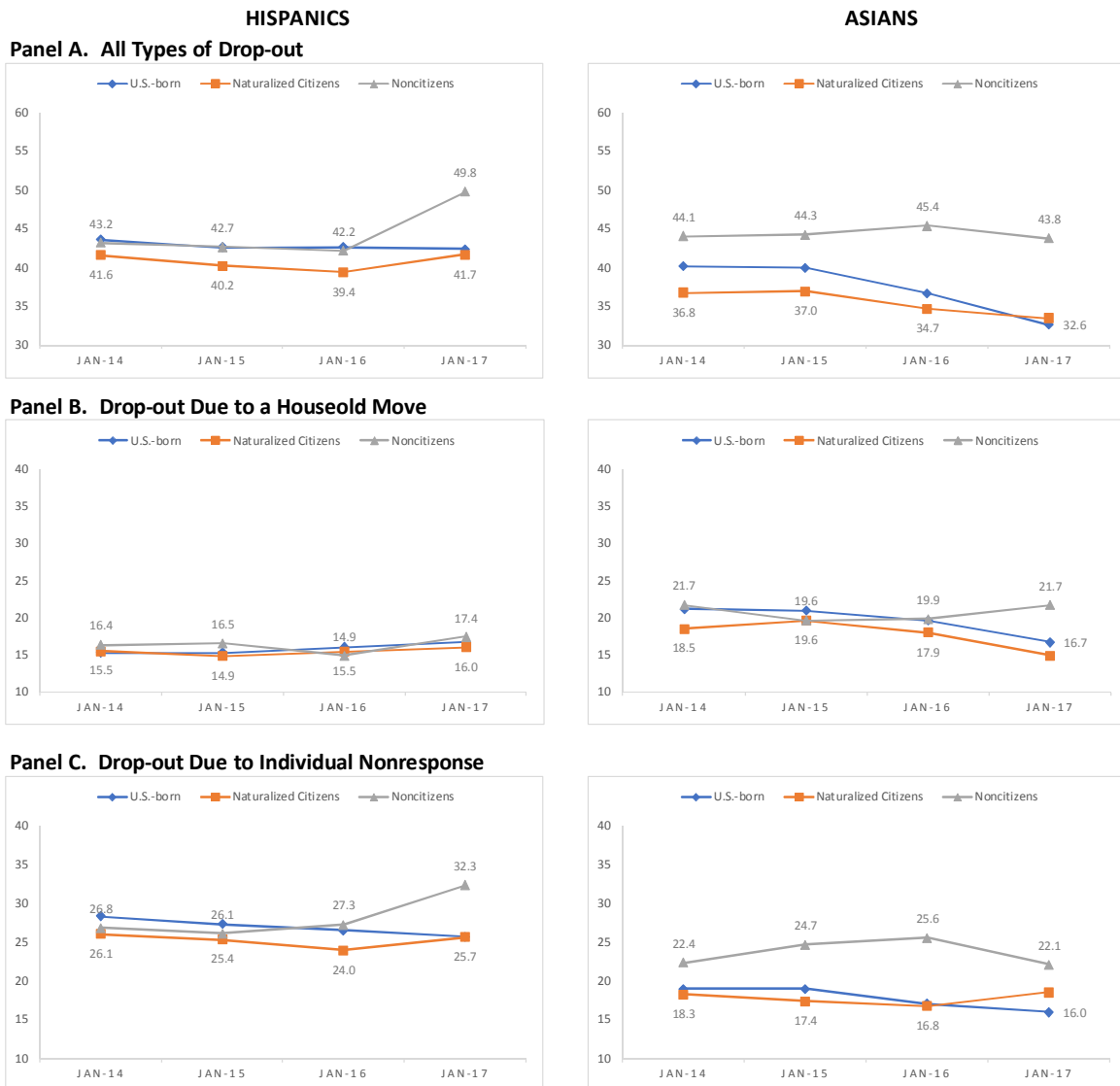


Figure A1. Adjusted Percentage Dropped-out by the 8th wave of the CPS, by Race/ethnicity, Citizenship, and Year of First CPS Interview

Sample: Monthly CPS 2014-2017 (Flood et al, 2018), adults age 18+ who were first interviewed between Sept 2014 and Jan 2017, excluding non-Hispanics identifying as "other" race.

Table 1-S. Sample Sizes in Current Population Survey

	All	Hispanic	Asian	Black	NH-White
Adults Age 18+					
2013	144,555	17,687	7,327	13,957	105,584
2014	146,035	17,867	7,133	14,575	106,460
2015	142,873	17,745	7,200	14,840	103,088
2016	142,718	17,955	7,456	14,489	102,818
2017	137,423	17,237	7,280	13,816	99,090
2018*	67,321	8,889	3,478	6,568	48,386
Total	780,925	97,380	39,874	78,245	565,426
Adults Age 18+ in Immigrant Households					
2013	27,748	10,970	5,971	2,079	8,728
2014	27,949	11,083	5,810	2,020	9,036
2015	27,538	11,019	5,823	2,074	8,622
2016	27,396	10,968	6,082	2,031	8,315
2017	26,650	10,578	5,917	1,984	8,171
2018*	13,421	5,490	2,848	971	4,112
Total	150,702	60,108	32,451	11,159	46,984

Sample: Monthly CPS 2013-2018 (Flood et al, 2018), adults age 18+ who were first interviewed between Jan 2013 and June 2018, excluding non-Hispanics identifying as "other" race; month-in-sample 1 only.

*2018 data includes only January through June

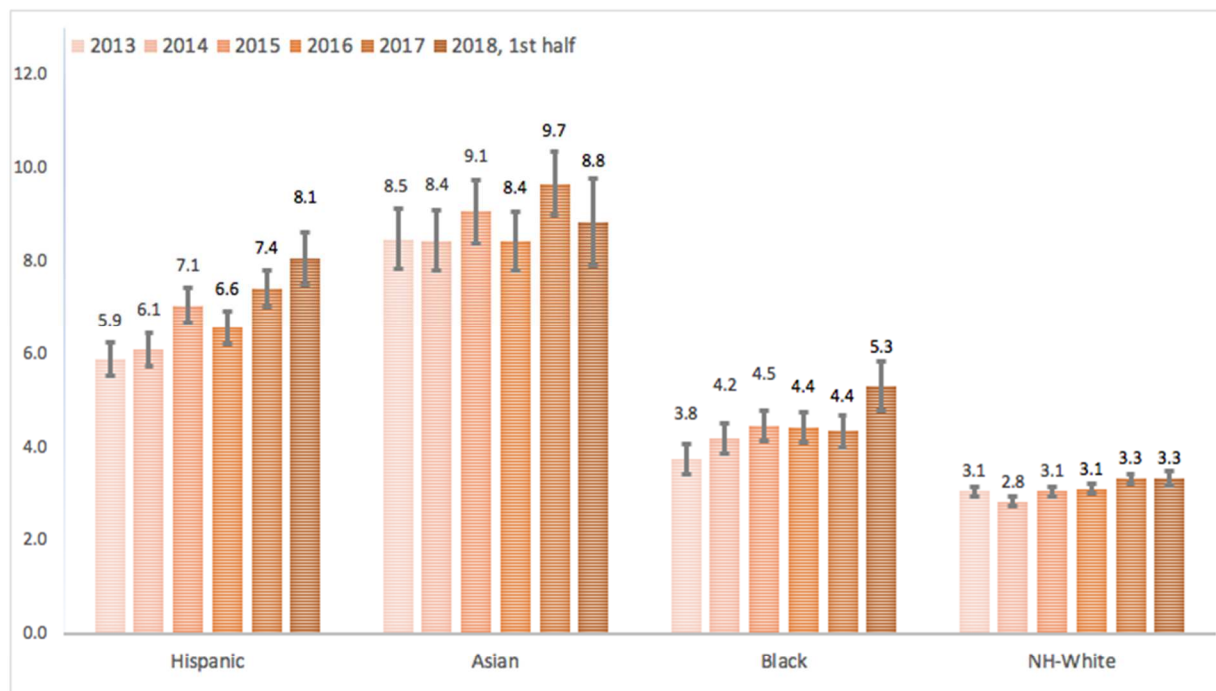


Figure 13-S. Percentage Item Non-Response on Citizenship or Place of Birth in the CPS by Race/Ethnicity and Year, 2013-2018

Sample: Monthly CPS 2013-2018 (Flood et al, 2018), adults age 18+ who were first interviewed between Jan 2013 and June 2018, excluding non-Hispanics identifying as "other" race; month-in-sample 1 only.
Error bars = 95% confidence intervals

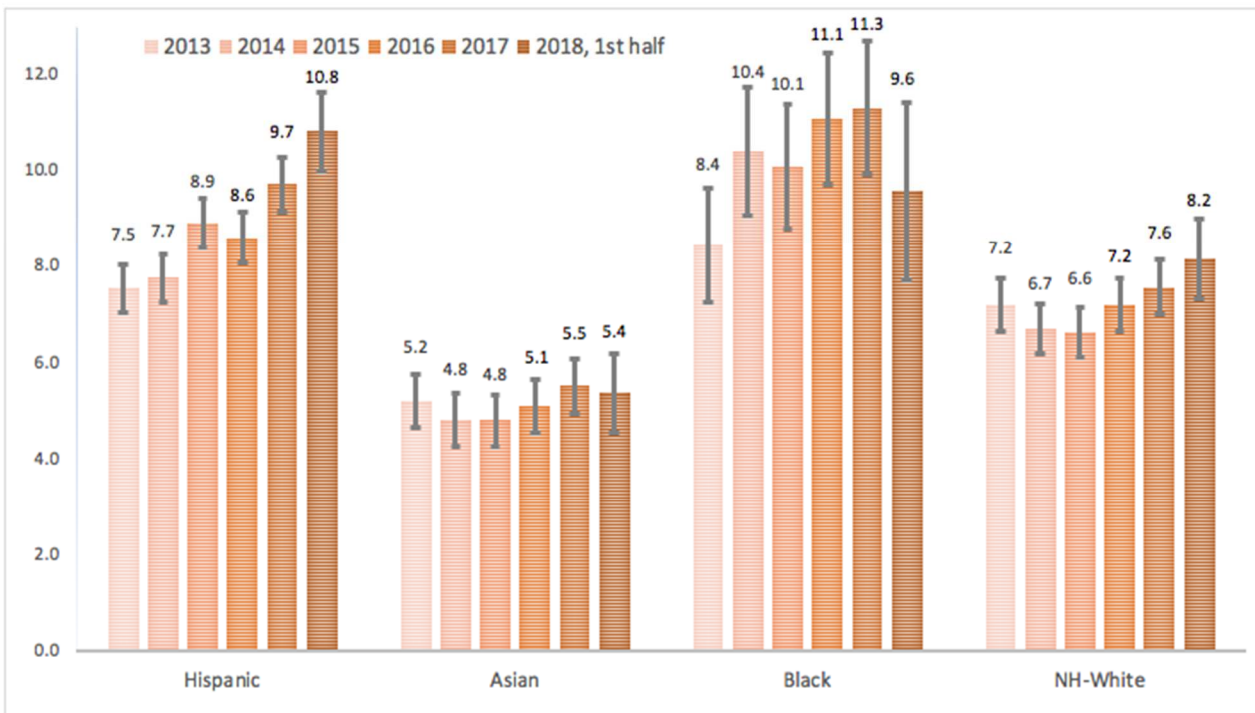


Figure 14-S. Percentage Item Non-Response on Citizenship or Place of Birth in the CPS by Race/Ethnicity and Year, Among Those in Immigrant Households, 2013-2018

Sample: Monthly CPS 2013-2018 (Flood et al, 2018), adults age 18+ who were first interviewed between Jan 2013 and June 2018, excluding non-Hispanics identifying as "other" race; month-in-sample 1 only.

Error bars = 95% confidence intervals

Table A1-S. Item Nonresponse on Citizenship/Nativity in CPS, by Race/ethnicity, Household Nativity, and Year

	Hispanic			Asian			Black			NH-White		
	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound
<i>All Adults (Estimates for Figure 13-S)</i>												
2013	5.9	5.5	6.2	8.5	7.8	9.1	3.8	3.4	4.1	3.1	3.0	3.2
2014	6.1	5.7	6.4	8.4	7.8	9.1	4.2	3.9	4.5	2.8	2.7	2.9
2015	7.1	6.7	7.4	9.1	8.4	9.7	4.5	4.1	4.8	3.1	3.0	3.2
2016	6.6	6.2	6.9	8.4	7.8	9.1	4.4	4.1	4.8	3.1	3.0	3.2
2017	7.4	7.0	7.8	9.7	9.0	10.3	4.4	4.0	4.7	3.3	3.2	3.4
2018*	8.1	7.5	8.6	8.8	7.9	9.8	5.3	4.8	5.9	3.3	3.2	3.5
<i>Adults in immigrant households (Estimates for Figure 14-S)</i>												
2013	7.5	7.0	8.0	5.2	4.6	5.8	8.4	7.2	9.6	7.2	6.7	7.7
2014	7.7	7.3	8.2	4.8	4.2	5.3	10.4	9.1	11.7	6.7	6.2	7.2
2015	8.9	8.4	9.4	4.8	4.2	5.3	10.1	8.8	11.4	6.6	6.1	7.1
2016	8.6	8.1	9.1	5.1	4.5	5.6	11.1	9.7	12.4	7.2	6.6	7.7
2017	9.7	9.1	10.3	5.5	4.9	6.1	11.3	9.9	12.7	7.6	7.0	8.1
2018*	10.8	10.0	11.6	5.4	4.5	6.2	9.6	7.7	11.4	8.2	7.3	9.0

*Jan-June 2018

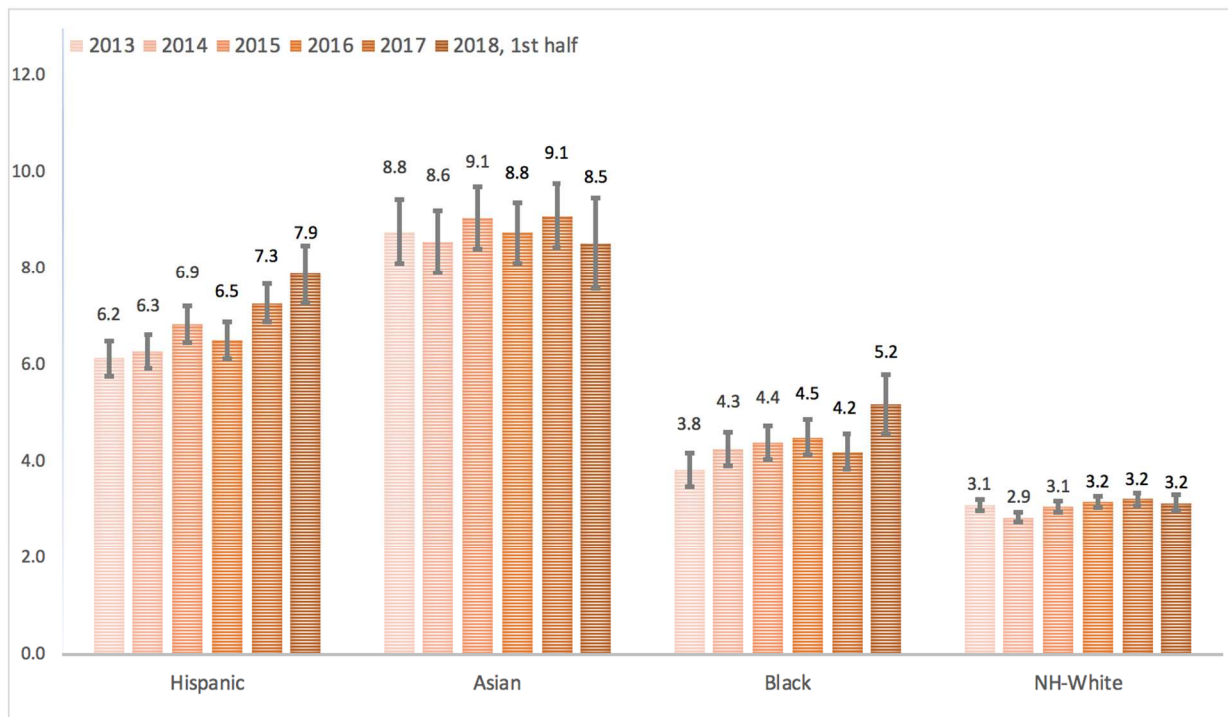


Figure A2-S. Adjusted Percentage Item Non-Response on Citizenship or Place of Birth in the CPS by Race/Ethnicity and Year, 2013-2018

Sample: Monthly CPS 2013-2018 (Flood et al, 2018), adults age 18+ who were first interviewed between Jan 2013 and June 2018, excluding non-Hispanics identifying as "other" race; month-in-sample 1 only.

Estimates are adjusted for state of residence, age, sex, education, non-response on age and sex, and month of interview (model available upon request).

Error bars = 95% confidence intervals

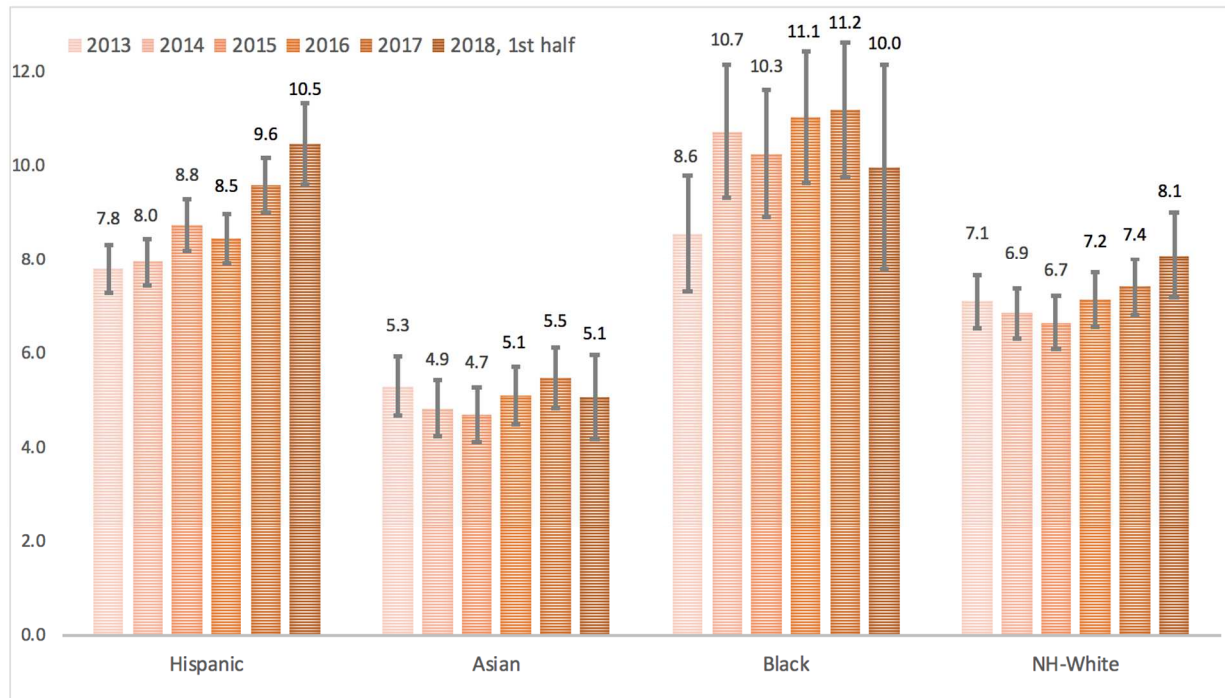


Figure A3-S. Adjusted Percentage Item Non-Response on Citizenship/Place of Birth in the CPS by Race/Ethnicity and Year, Among Those in Immigrant Households, 2013-2018

Sample: Monthly CPS 2013-2018 (Flood et al, 2018), adults age 18+ who were first interviewed between Jan 2013 and June 2018, excluding non-Hispanics identifying as "other" race; month-in-sample 1 only.

Estimates are adjusted for state of residence, age, sex, education, non-response on age and sex, and month of interview (model available upon request).

Error bars = 95% confidence intervals

Table A2-S. Adjusted Item Nonresponse on Citizenship/Nativity in CPS, by Race/ethnicity, Household Nativity, and Year

	Hispanic			Asian			Black			NH-White		
	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound
<i>All Adults (Estimates for Figure A2-S)</i>												
2013	6.2	5.8	6.5	8.8	8.1	9.5	3.8	3.5	4.2	3.1	3.0	3.2
2014	6.3	5.9	6.7	8.6	7.9	9.2	4.3	3.9	4.6	2.9	2.8	3.0
2015	6.9	6.5	7.2	9.1	8.4	9.7	4.4	4.0	4.8	3.1	3.0	3.2
2016	6.5	6.1	6.9	8.8	8.1	9.4	4.5	4.2	4.9	3.2	3.1	3.3
2017	7.3	6.9	7.7	9.1	8.5	9.8	4.2	3.9	4.6	3.2	3.1	3.4
2018*	7.9	7.3	8.5	8.5	7.6	9.5	5.2	4.6	5.8	3.2	3.0	3.3
<i>Adults in immigrant households (Estimates for Figure A3-S)</i>												
2013	7.8	7.3	8.3	5.3	4.7	6.0	8.6	7.3	9.8	7.1	6.6	7.7
2014	8.0	7.5	8.5	4.9	4.3	5.5	10.7	9.3	12.2	6.9	6.3	7.4
2015	8.8	8.2	9.3	4.7	4.1	5.3	10.3	8.9	11.6	6.7	6.1	7.2
2016	8.5	7.9	9.0	5.1	4.5	5.7	11.1	9.7	12.4	7.2	6.6	7.8
2017	9.6	9.0	10.2	5.5	4.9	6.1	11.2	9.8	12.6	7.4	6.8	8.0
2018*	10.5	9.6	11.3	5.1	4.2	6.0	10.0	7.8	12.2	8.1	7.2	9.0

*Jan-June 2018

Table S1. Change in Item Nonresponse on Citizenship or Place of Birth (adjusted CPS data)

	Hispanic	Asian	Black	NH-White
All Adults				
Change 2013-15 (2 years)	0.7	0.3	0.6	0.0
Change 2016-18 (1.5 years)	1.4	-0.2	0.7	0.0
Diff in Change	0.7	-0.5	0.1	0.0
Significance of Diff in Change	*	ns	ns	ns
Adults in Immigrant Households				
Change 2013-15 (2 years)	0.9	-0.6	1.7	-0.5
Change 2016-18 (1.5 years)	2.0	0.0	-1.1	0.9
Diff in Change	1.1	0.6	-2.8	1.4
Significance of Diff in Change	*	ns	*	*

* p<0.05

ns = not significant

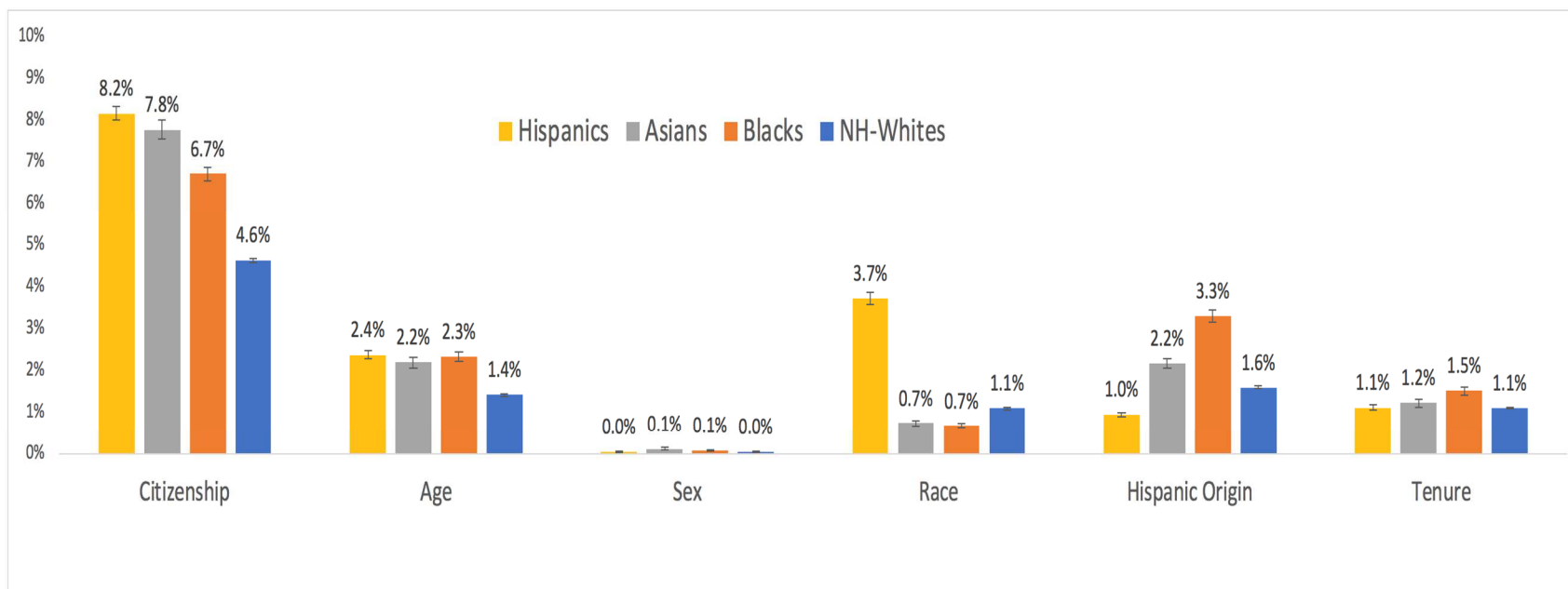
Table S2. Number of Cases in the American Community Survey, Adults age 18+ 2013-2017

	2013	2014	2015	2016	2017	2013-2017
All Adults Age 18+						
Hispanics	280,822	286,850	294,241	300,380	307,223	1,469,516
Asians	113,759	117,328	120,607	124,724	131,080	607,498
Blacks	218,883	221,973	218,821	217,791	212,604	1,090,072
NH-Whites	1,643,405	1,643,729	1,652,979	1,653,194	1,667,896	8,261,203
Total	2,256,869	2,269,880	2,286,648	2,296,089	2,318,803	11,428,289
Adults in Immigrant Households						
Hispanics	177,742	180,900	185,383	186,660	189,958	920,643
Asians	102,060	105,479	108,516	111,602	117,436	545,093
Blacks	31,753	32,825	33,545	34,105	33,840	166,068
NH-Whites	145,897	145,616	149,183	150,906	153,976	745,578
Total	457,452	464,820	476,627	483,273	495,210	2,377,382

Source: 2013-2017 1% public-use microdata ACS files (downloaded from the Census FTP download site)

Table S3. Item Nonresponse on Citizenship in ACS, by Race/ethnicity, Household Nativity, and Year

	Hispanic			Asian			Black			NH-White		
	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound	Percent	lower-bound	upper-bound
<i>All Adults (Estimates for Figure S1)</i>												
2013	5.8	5.7	6.0	6.8	6.5	7.0	5.6	5.4	5.8	4.3	4.2	4.3
2014	6.2	6.1	6.4	7.4	7.1	7.6	5.8	5.6	6.0	4.5	4.4	4.5
2015	6.8	6.7	7.0	7.5	7.2	7.7	6.5	6.3	6.6	4.8	4.8	4.9
2016	7.4	7.3	7.6	7.6	7.4	7.9	6.5	6.3	6.6	4.7	4.6	4.7
2017	8.2	8.0	8.3	7.8	7.5	8.0	6.7	6.5	6.9	4.6	4.6	4.7
<i>Adults in Immigrant Households (Estimates for Figure S2)</i>												
2013	6.6	6.4	6.8	7.0	6.7	7.2	9.0	8.4	9.5	6.6	6.3	6.8
2014	6.9	6.7	7.1	7.6	7.3	7.9	9.4	8.9	9.8	6.6	6.4	6.8
2015	7.5	7.3	7.7	7.7	7.4	7.9	10.2	9.7	10.8	6.9	6.7	7.2
2016	8.5	8.3	8.6	7.8	7.6	8.1	10.3	9.8	10.7	6.8	6.5	7.0
2017	9.3	9.1	9.6	8.0	7.7	8.2	10.5	10.0	11.0	7.1	6.9	7.2



**Figure S3. Item Non-Response on Decennial Census Items, by Race/Ethnicity,
Among Adults Age 18+ in the 2017 ACS**

Source: 2017 1% public-use microdata ACS files (downloaded from the Census FTP download site)

Error bars = 95% confidence intervals (calculated using ACS replicate weights)

Table S4. Percentage Item Nonresponse on Proposed Decennial Census Items, by Race/Ethnicity, Among Adults Age 18+ in the 2017 ACS (estimates for Figure S3)

	Hispanic			Asian			Black			NH-White		
	%	Low	High	%	Low	High	%	Low	High	%	Low	High
Citizenship	8.2	8.0	8.3	7.8	7.5	8.0	6.7	6.5	6.9	4.6	4.6	4.7
Age	2.4	2.3	2.5	2.2	2.1	2.3	2.3	2.2	2.4	1.4	1.4	1.5
Sex	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1
Race	3.7	3.6	3.9	0.7	0.7	0.8	0.7	0.6	0.7	1.1	1.1	1.1
Hispanic Origin	1.0	0.9	1.0	2.2	2.1	2.3	3.3	3.2	3.4	1.6	1.6	1.6
Tenure	1.1	1.1	1.2	1.2	1.1	1.3	1.5	1.4	1.6	1.1	1.1	1.1

Low = Lower-bound 95% confidence interval

High = Upper-bound 95% confidence interval

Table S5. Annual Percentage Point Change Since 2013 in Item Nonresponse for Decennial Census Items, Hispanic Adults in the ACS (Estimates for Figure S4)

		Percent	Low	High
Citizenship	2014	0.4	0.2	0.6
	2015	1.0	0.8	1.2
	2016	1.6	1.4	1.8
	2017	2.3	2.1	2.5
Age	2014	0.2	0.1	0.3
	2015	0.3	0.2	0.4
	2016	0.4	0.3	0.5
	2017	0.6	0.4	0.7
Race	2014	0.0	0.0	0.0
	2015	0.0	0.0	0.0
	2016	0.0	0.0	0.0
	2017	0.0	0.0	0.0
Hispanic Origin	2014	-0.3	-0.5	-0.1
	2015	-0.4	-0.6	-0.2
	2016	-0.3	-0.5	-0.1
	2017	-0.3	-0.4	-0.1
Tenure	2014	0.0	-0.1	0.1
	2015	-0.1	-0.2	0.0
	2016	-0.1	-0.2	0.0
	2017	-0.1	-0.2	0.0

Low = Lower-bound 95% confidence interval

High = Upper-bound 95% confidence interval

Table S6. Change in Item Nonresponse on Citizenship in the ACS

	Hispanic	Asian	Black	NH-White
All Adults Age 18+				
Change 2013-2015	1.0	0.7	0.9	0.5
Change 2015-2017	1.3	0.3	0.2	-0.2
Diff in Change	0.4	-0.4	-0.7	-0.7
Significance of Diff in Change	*	ns	*	*
Adults in Immigrant Households				
Change 2013-2015	0.9	0.7	1.3	0.4
Change 2015-2017	1.8	0.3	0.3	0.1
Diff in Change	0.9	-0.4	-1.0	-0.3
Significance of Diff in Change	*	ns	ns	Ns

* statistically significant ($p < 0.05$)

ns = not significant